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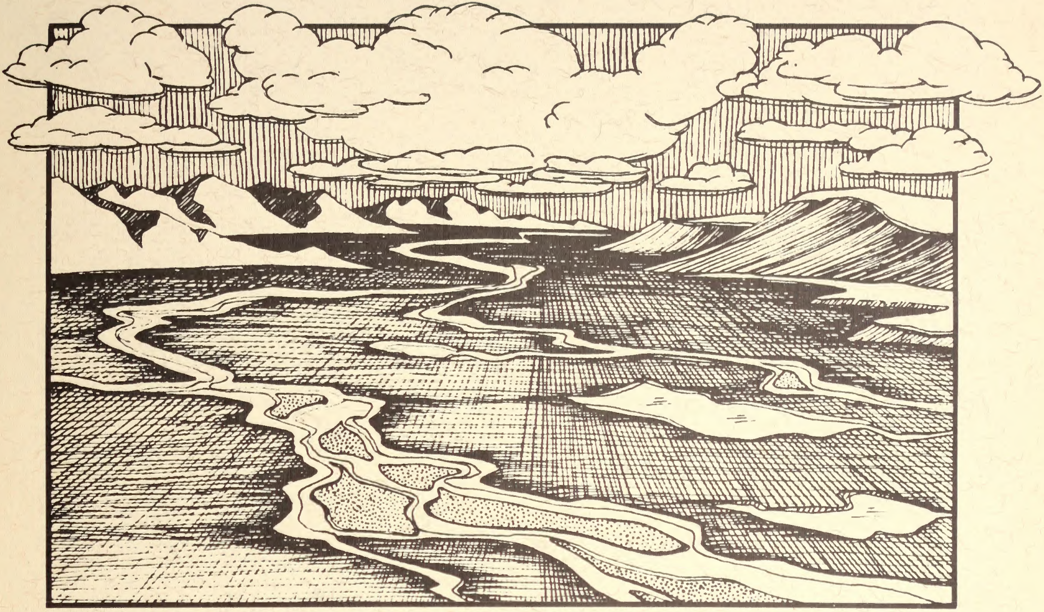

Central Arctic Management Area

Wilderness Recommendations

Final Environmental Impact Statement

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BUREAU OF LAND MANAGEMENT

Alaska State Office
701 C Street, Box 13
Anchorage, Alaska 99513-0099

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:

SEP 14 1988

Dear Reader:

Enclosed for your review is the Central Arctic Management Area Wilderness Recommendations and Final Environmental Impact Statement (EIS) prepared by the Bureau of Land Management, Arctic District Office. A draft of this document was published for public review and comment as a supplement to the draft Utility Corridor Resource Management Plan in August of 1987. This Final EIS analyzes the impacts of the Proposed Action recommending the addition of 41,000 acres of the Central Arctic Management Area (CAMA) Wilderness Study Area (WSA) to the National Wilderness Preservation System. Also analyzed are the impacts of four other alternatives including a no wilderness/no action alternative, an all wilderness alternative, and two partial wilderness alternatives.

This final EIS was prepared in accordance with the requirements of Section 102(C) of the National Environmental Policy Act of 1969 and responds to the mandates of Sections 1001 and 1004 of the Alaska National Interest Lands Conservation Act of 1980 (ANILCA) to review and make recommendations to the President and Congress by December of 1988 for wilderness designation on all federal lands within CAMA. Completion of this document concludes the wilderness study process. However, the proposed recommendations contained herein are subject to change during administrative review.

We appreciate your interest and involvement in the study process.

Sincerely Yours,

Michael J Penfold

Michael J. Penfold
BLM Alaska State Director

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FINAL ENVIRONMENTAL IMPACT STATEMENT
and
WILDERNESS RECOMMENDATIONS
for the
CENTRAL ARCTIC MANAGEMENT AREA WILDERNESS STUDY AREA
ALASKA

Prepared by
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
ARCTIC DISTRICT

Michael J. Penfold

Michael J. Penfold
BLM Alaska State Director

SEP 14 1988

Date

ENVIRONMENTAL IMPACT STATEMENT
WILDERNESS RECOMMENDATIONS
for the
CENTRAL ARCTIC MANAGEMENT AREA
WILDERNESS STUDY AREA

BLM ARCTIC DISTRICT OFFICE
FAIRBANKS, ALASKA

Draft ( ) Final (XX)

Lead Agency: U.S. Department of the Interior

Type of Action: Administrative ( ) Legislative (XX)

ABSTRACT

This Final Enviromental Impact Statement (EIS) contains wilderness recommendations on 3,680,000 acres of federal land on the north slope of Alaska in an area referred to as the Central Arctic Management Area Wilderness Study Area (CAMA WSA). This EIS analyzes the impacts of BLMs Proposed Action recommending the addition of 41,000 acres of the CAMA WSA to the National Wilderness Preservation System. Also analyzed are the impacts of four other alternatives including a no wilderness/no action alternative, an all wilderness alternative, and two partial wilderness alternatives.

This final EIS was prepared in accordance with the requirements of Section 102(C) of the National Environmental Policy Act of 1969 and responds to the mandates of Sections 1001 and 1004 of the Alaska National Interest Lands Conservation Act of 1980 (ANILCA) to review and make recommendations to the President and Congress by December of 1988 for wilderness designation on all federal lands within CAMA.

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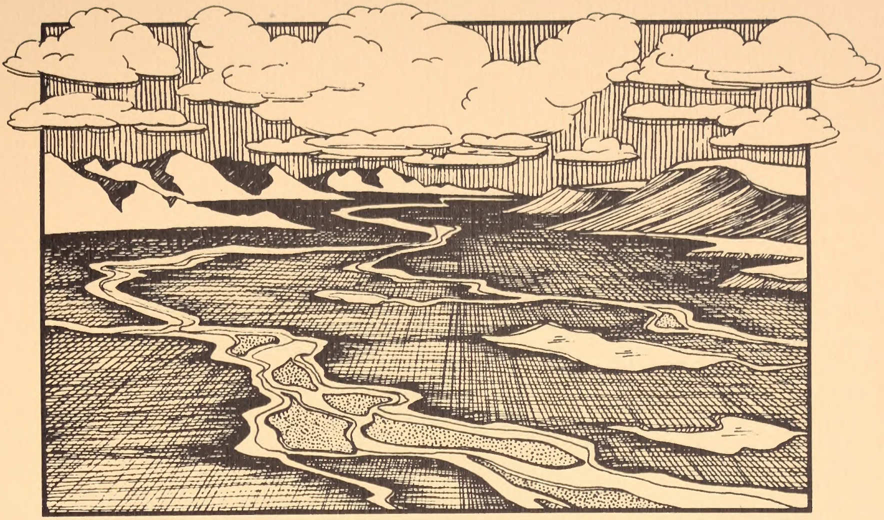


Summary

SUMMARY

BACKGROUND

This Environmental Impact Statement (EIS) is an analysis of the effects of wilderness designation or nondesignation of 3,680,000 acres of federal land located on the north slope of Alaska. The lands to be studied are contained within an area described by Sec. 1001 of the Alaska National Interest Lands Conservation Act of 1980 (ANILCA). This area is commonly referred to as the Central Arctic Management Area or CAMA. Section 1001 of ANILCA requires that only the federal lands within the CAMA be studied. Section 1004 (c) of ANILCA further states that the federal lands described in Sec. 1001 are a Wilderness Study Area (WSA). Within this document, these federal lands are referred to as the CAMA WSA.

Sections 1001 and 1004 of ANILCA direct BLM to make recommendations on CAMA WSA wilderness values. The Act also directs BLM to conduct an interdisciplinary natural resource evaluation of these lands. This evaluation includes estimates of the oil and gas potential of the CAMA WSA lands and the need for wildlife protection should the development of energy resources occur. The findings and recommendations resulting from this interdisciplinary study are found in the draft ANILCA 1001 Report. This report is scheduled to be sent to Congress by December of 1988. The ANILCA 1001 report also serves as a Wilderness Study Report (WSR) which is required by the BLM wilderness study process.

This Wilderness EIS is supporting documentation for the ANILCA 1001 Report and contains the necessary elements of the required Wilderness Study Report. The draft version of this Wilderness EIS was published in August, 1987 as an appendix to the draft Utility Corridor Resource Management Plan (USDI 1987).

MAJOR CONCERNS AND AREAS OF CONTROVERSY

A scoping process for this Wilderness EIS was carried out simultaneously with the scoping process for the preparation of the draft Utility Corridor Resource Management Plan. This scoping process included an assessment of issues resulting from meetings with the public and with resource specialists within BLM and other federal and state agencies. Early scoping meetings took place in the spring of 1986. Additional comments on wilderness and related issues were received during a 90 day public comment period on the draft wilderness EIS held between August and December of 1987. The following is a list of issues, concerns or questions which resulted from scoping.

1. What effect would nondesignation have on CAMA WSA wilderness values?

2. What effect would designation or nondesignation have on oil and gas resource exploration and development?

3. What effect would designation or nondesignation have on future oil and gas transportation systems?

4. What effect would wilderness designation have on locatable (hardrock) mineral development?

5. What effect would designation or nondesignation have on big game wildlife habitat and populations?

6. What effect would designation or nondesignation have on recreational use of ORVs?

7. What effect would designation or nondesignation have on subsistence use patterns?

8. What effect would designation or nondesignation have on area employment, income, population, and public revenues.

SUMMARY OF PROPOSED ACTION AND ALTERNATIVES

This EIS considers five alternatives in detail. The following is a brief summary of the alternatives considered:

1. BLM Proposed Action:

   Designate the Upper Nigu block as wilderness (41,000 acres). This block of land is located in the southwestern corner of CAMA and is adjacent to the Gates of the Arctic Park and the Noatak National Preserve.

2. No Wilderness Alternative

   Under this alternative no lands in CAMA would be designated wilderness.

3. All Wilderness Alternative

   Under this alternative 3.4 million acres of the CAMA WSA would be recommended as wilderness. Only that area within the Utility Corridor.roughly corresponding to the lands visible from the Dalton Highway are not recommended for wilderness designation. This nondesignated area was determined nonwilderness in character in 1980 (U.S. Department of the Interior, BLM, 1980).

4. Partial Wilderness Alternative:

   Under this alternative four blocks of land within the CAMA WSA (a total of 486,000 acres) would be recommended for wilderness designation. Wilderness characteristics in these four areas clearly exceed the wilderness values specified in the wilderness inventory guidelines.

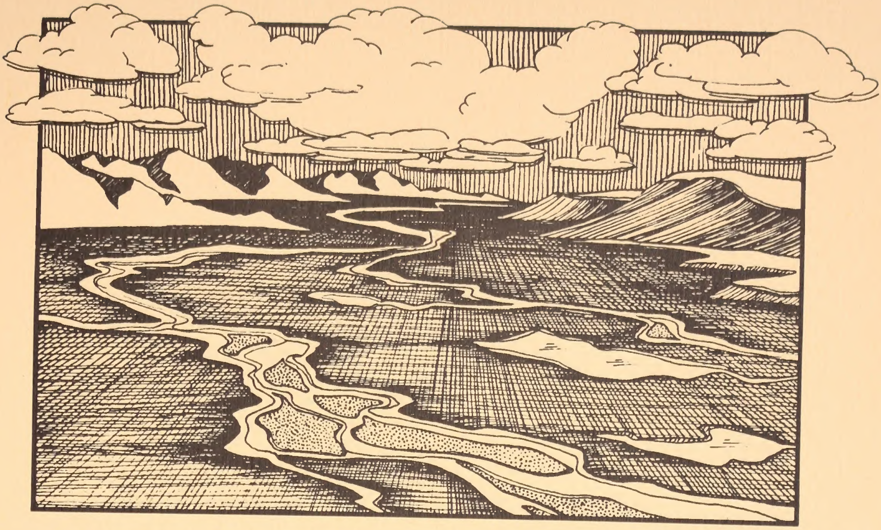
5. Oolamnagavik-Etivluk Alternative

   This is a new alternative created in response to public comment received on the draft wilderness EIS published in August of 1987. Under this alternative two blocks of land in western CAMA (a total of 867,000 acres) are recommended for wilderness designation.

An abbreviated summary of impacts for each alternative, including the Proposed Action, appears on the next page in Table 1. An unabridged summary table can be found at the end of Chapter 2.

Table 1 Abbreviated Summary Table of Impacts

Issues	Alternatives				
	Proposed	No Wilderness	All Wilderness	Partial Wilderness	Oolamnagavik-Etivluk
Wilderness Values.	Wilderness values preserved on 41,000 acres through legislative protection.	No legislative protection of wilderness values.	Wilderness preserved on 3,364,000 acres through legislative protection.	Wilderness values preserved on 486,000 acres through legislative protection.	Wilderness values preserved on 867,000 acres through legislative protection.
Oil/Gas Development and Transportation.	There would be no impact to potential oil and gas development.	Same as Proposed Action: no impact.	Potential development of oil and gas resources would be precluded in CAMA as well as in much of NPR-A.	Potential development of 8 percent of high oil and gas potential lands. Additional costs in pipeline construction anticipated.	Potential development of 26 percent high oil and gas lands precluded. Additional costs in pipeline construction anticipated.
Locatable Mineral Development	There would be no impacts to potential hardrock mineral development. One placer mining operation anticipated.	Same as Proposed Action.	No hardrock mineral development anticipated; one placer operation forgone.	No hardrock mineral development anticipated; one placer operation forgone.	Same as Proposed Action and no wilderness alternative; one placer operation anticipated.
Big Game Wildlife and Habitat.	3,800 acres of direct habitat loss; 63,000 acres of indirect habitat disturbance.	Same as Proposed Action.	No loss of habitat as a result of this alternative.	3,500 acres of direct habitat loss; 58,000 acres of indirect disturbance.	2,500 acres of direct habitat loss; 49,000 acres of indirect disturbance.
Off-Road Vehicle Recreation.	No impact.	No impact.	No impact.	No impact.	No impact.
Subsistence use Patterns.	Potential for some adverse effects; no significant restriction.	Same as Proposed Action.	No impact.	Same as Proposed Action.	Same as Proposed Action.
Socioeconomic Patterns.	Potential revenues from future mining and oil and gas development would not be precluded.	Same as Proposed Action.	Potential revenues from future mining and oil and gas development would be precluded.	Potential revenues from oil and gas development would not be precluded; potential revenues from mining would be precluded.	Potential revenues from oil and gas development anticipated to be 25 percent less under this alternative.



Abbreviations and Glossary

ABBREVIATIONS

ADF&G	Alaska Department of Fish and Game
ANCSA	Alaska Native Claims Settlement Act
ANILCA	Alaska National Interest Lands Conservation Act of 1980
ANWR	Arctic National Wildlife Refuge (U.S. Fish and Wildlife Service
ASRC	Arctic Slope Regional Corporation
BLM	Bureau of Land Management, U.S. Department of the Interior
CAMA	Central Arctic Management Area
CFR	Code of Federal Regulations
EIS	Environmental Impact Statement
FEIS	Final Environmental Impact Statement
FLPMA	Federal Land Policy and Management Act of 1976
NPR-A	National Petroleum Reserve-Alaska
NPS	National Park Service, U.S. Department of the Interior
NSB	North Slope Borough
NWPS	National Wilderness Preservation System
ORV	Off-Road Vehicle
PLO	Public Land Order
RMP	Resource Management Plan
TAPS	Trans Alaska Pipeline System
USFS	U.S. Forest Service, U.S. Department of the Agriculture
USGS	U.S. Geological Survey, U.S. Department of the Interior
USF&WS	U.S. Fish and Wildlife Service, U.S. Department of the Interior
VUD	Visitor Use Day
WSA	Wilderness Study Area

GLOSSARY

A

ANALYSIS. The examination of existing and/or recommended management needs and their relationships to discover and display the outputs, benefits, effects, and consequences of initiating a proposed action.

ANILCA SECTION 811. Allows rural residents engaged in subsistence uses reasonable access to subsistence resources on the public lands. This includes the use of snowmobiles, motorboats, and other means of surface transportation traditionally employed for such purposes by local residents, subject to reasonable regulation.

ANILCA SECTION 1110. Addresses access provisions and permits the use of airplanes, motorboats and snowmachines in Alaskan wilderness for traditional activities. Such use shall be subject to reasonable regulations by the Secretary to protect the natural and other values of the conservation system units.

ANILCA SECTION 1111. Allows temporary access for surveys and geophysical studies.

ARCHAEOLOGY. The scientific study of extinct peoples or of past phases of the culture of historic people through skeletal remains, fossils, and objects of human workmanship found in the earth.

ARCTIC SLOPE REGIONAL CORPORATION (ASRC). A Regional Native Corporation established by Alaska Native Claims Settlement Act of 1971 (ANCSA). ASRC owns and administers over a million and a half acres within CAMA.

E

ECOSYSTEM. A functional system that includes the organisms of a natural community together with their environment.

ENVIRONMENT. All that surrounds an organism and interacts with it.

F

FEDERAL LAND (for this study). Lands the title to which is in the United States after the date of enactment of ANILCA in 1980 [ref Sec. 102(2) of ANILCA]

H

HABITAT. The place where a plant or animal species naturally lives and grows.

HABITAT MANAGEMENT PLAN. A wildlife oriented activity plan for a geographical area of public lands which identifies specific wildlife habitat management actions or prescriptions to be implemented in achieving specific objectives related to RMP document decisions.

I

IMPACT. The effect, influence, alteration, or imprint of an activity.

INTERIM MANAGEMENT POLICY (IMP). BLM policy mandated by FLPMA providing protection of wilderness character on lands being studied for possible wilderness designation.

L

"LIMITED" CLASSIFICATION FOR ORVS. Lands limited to noncommercial casual use of ORVs without permit during periods of frozen ground and adequate snow cover. Open to commercial use by permit only.

M

MANAGEABLE. In the context of wilderness, manageability refers to legal and physical characteristics of Wilderness Study Areas. Areas with extensive valid existing rights, extensive inholdings, or terrain/access conditions posing ORV control problems may not be manageable as wilderness; areas without such factors generally would be manageable.

MITIGATIVE MEASURES. Action to replace, salvage or reduce impact to a resource value which may be damaged or destroyed by another action.

MULTIPLE USE. "Management of public lands and their various resource values so that they are used in the combination that will best meet the present and future needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; the use of some lands for less than all of the resources; a combination of balanced and diverse resource uses that take into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural, scenic, scientific, and historical values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output." (From Section 103, FLPMA.)

N

NATIONAL WILDERNESS PRESERVATION SYSTEM. A system composed of Federally owned areas designated by Congress as Wilderness Areas. These areas shall be administered for the use and enjoyment of the American people in such a manner as will leave the lands unimpaired for future use and enjoyment as wilderness.

NATURALNESS. An area which "generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable."

O

OFF-ROAD VEHICLE (ORV). Any motorized vehicle designed for or capable of cross-country travel over land, water, sand, snow, ice, marsh, swampland, or other terrain.

OUTSTANDING. Standing out among others of its kind; conspicuous; prominent. Superior to others of its kind; distinguished; excellent.

P

PHYSIOGRAPHIC PROVINCE. A region of similar structure and climate that has had a united geomorphic history.

PINGO. An Eskimo term for a perennial, conical shaped ice-cored mound that can be as much as 65 meters high and 1,000 meters in diameter. Generally found on the arctic coastal plains north of the Brooks Range.

PLACER. A place where metal, such as gold, is obtained by washing; an alluvial or glacial deposit, as of sand or gravel, containing particles of gold or other valuable minerals.

PRIMITIVE AND UNCONFINED RECREATION. Nonmotorized and nondeveloped types of outdoor recreational activities.

PRIMITIVE RECREATION VALUES. Environmental features that enhance the quality of unconfined, undeveloped, and nonmotorized recreation (e.g. hiking, backpacking, cross-country skiing, etc.).

PUBLIC PARTICIPATION. The process of attaining citizen input into each stage of development of planning documents. It is required as a major input into the BLM's planning system.

R

RAPTOR. Any predatory bird such as a falcon, hawk, eagle, or owl that has feet with sharp talons or claws adapted for seizing prey and a hooked beak for tearing flesh.

RESOURCES. All of the products and physical values produced or contained within public lands. They include the values known as natural resources (i.e., coal, oil, wildlife, etc.).

RESOURCE MANAGEMENT PLAN (RMP). A land use plan as prescribed by Section 202 of the Federal Land Policy and Management Act. This is the basic decision document of BLM's resource management planning process, used to establish allocation and coordination among uses for the various resources within a Resource (or District in Alaska) Area. RMP regulations appear in 43 CFR 1601 and BLM Manual Section 1602.22.

RIPARIAN HABITAT. Situated on or pertaining to the bank of a river, stream, or other body of water.

ROADLESS. Refers to the absence of roads that have been improved and maintained by mechanical means to ensure relatively regular and continuous use. A trail maintained solely by the passage of vehicles does not constitute a road.

S

SIGNIFICANT RESTRICTION TO SUBSISTENCE USES. BLM policy states that a significant restriction to subsistence uses and needs could occur if there is: 1) a reduction in harvestable resources used for subsistence purposes, 2) there is a reduction in the availability of resources caused by an alteration in their distribution, migration, or location, or 3) a limitation on the access of subsistence users to harvestable resources. Generally, only the prediction of large or substantial effects as opposed to slight effects in one or more of these three categories would result in a Section 810 evaluation of significant restriction to subsistence uses and needs.

SOLITUDE. The State of being alone or remote from habitations; isolation. A lonely, unfrequented, or secluded place.

SPECIAL FEATURES. An area containing ecological, geological, or other features of scientific, educational, scenic, or historical value.

SPLIT ESTATE. Lands where the surface is Federally owned but the subsurface mineral estate (mineral resources) is nonfederally owned.

STATE LANDS. Land controlled or administered by the State of Alaska.

STATE SELECTED LANDS. Federal lands chosen by the State of Alaska for future conveyance to meet the State's land entitlement granted under provisions of the Alaska Statehood Act .

SUBSISTENCE USES. Section 803 of ANILCA defines the term "subsistence uses" to mean "..the customary and traditional uses by rural Alaskan residents of wild, renewable resources for direct personal or family consumption as food, shelter, fuel, clothing, tools, or transportation; for the making and selling of handicraft articles out of nonedible by-products of fish and wildlife resources taken for personal or family consumption; for barter, or sharing for personal or family consumption; and for customary trade." For the purposes of this definition, the term: (1) "family" means all persons related by blood, marriage, or adoption, or any person living within the household on a permanent basis; and (2) "barter" means the exchange of fish or wildlife or their parts, taken for subsistence uses - (a) for other fish or game or their parts; or (b) for other food or for nonedible items other than money if the exchange is of a limited and noncommercial nature.

SUITABILITY. Used in the context of determining an area's eligibility or noneligibility for recommendation as wilderness. In the Federal Land Policy and Management Act, suitability means determining whether the area is more suitable for wilderness designation or more suitable for other uses.

T

THREATENED SPECIES. Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. This is further defined by the Endangered Species Act of 1973.

TRADITIONAL TRAVEL ROUTES. Recreational and/or subsistence travel behavior inherited over time through social contacts and relationships.

TRADITIONAL USE. Use (e.g., berry picking, hunting, ORV use) of an area that has occurred before 1980.

U

UNCONFINED RECREATION. Recreation occurring in open country without developed facilities; where the visitor may be free to wander over a large expanse of land, and where the visitor may explore unimpeded, except by natural features.

V

VISIBILITY. The greatest distance in a given direction where it is possible to see and identify with the unaided eye a prominent dark object against the sky at the horizon.

VISITOR USE DAY (VUD). Twelve visitor hours which may be aggregated by one or more persons in single or multiple visits.

W

WILDERNESS. An area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain. An area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation.

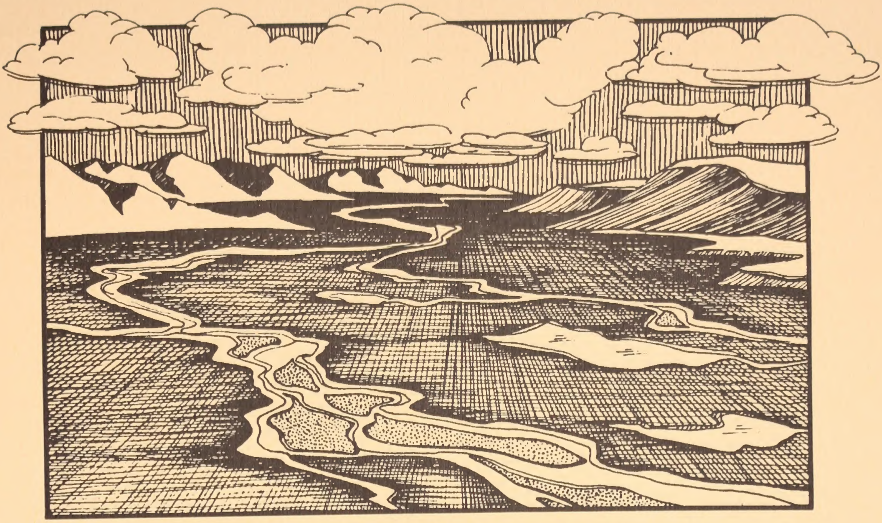
WILDERNESS AREA. An area officially designated as wilderness by Congress. Wilderness areas will be managed to preserve wilderness characteristics and shall be devoted to "the public purposes of recreation, scenic, scientific, educational, conservation, and historical use."

WILDERNESS MANAGEMENT POLICY. The BLM policy that governs administration of public lands designated as Wilderness Areas by Congress. It is based on the mandate of Congress as contained in the Wilderness Act of 1964, the Federal Land Policy and Management Act (FLPMA) of 1976 and the Alaska National Interest Lands Conservation Act (ANILCA) of 1980.

WILDERNESS STUDY AREA (WSA). Areas under study for possible inclusion as a Wilderness Area in the National Wilderness Preservation System (NWPS).

WILDERNESS VALUES. Values fall into three broad categories: (1) naturalness (appears to have been affected primarily by the forces of nature with the imprints of man's work substantially unnoticeable); (2) outstanding opportunities for solitude or a primitive and unconfined type of recreation; and (3) special features.

WITHDRAWAL. An action that restricts the use of public land and segregates the land from some or all of the public land or mineral laws.



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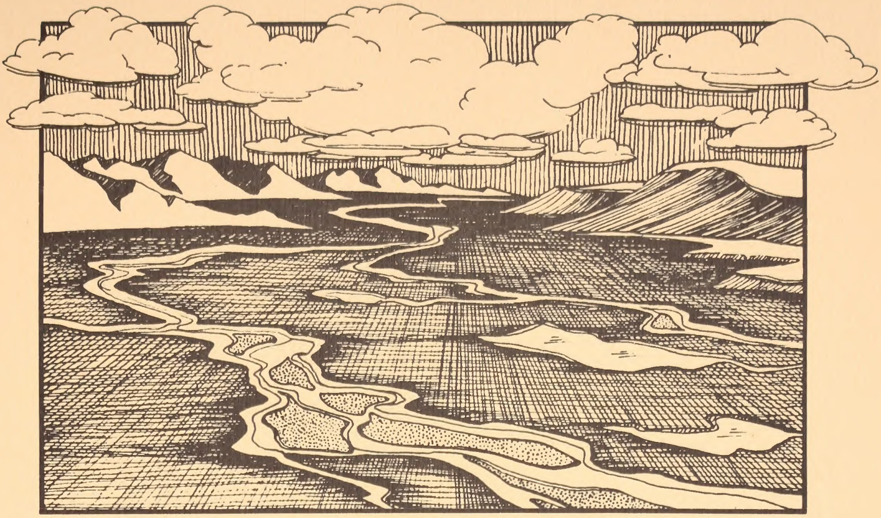

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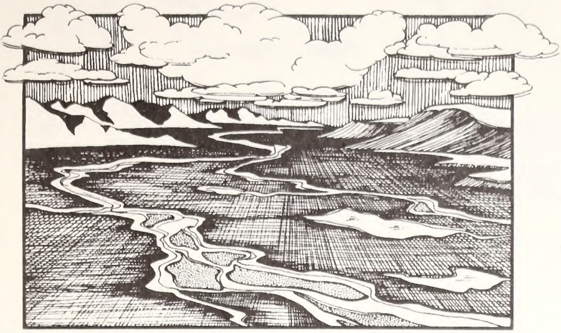


CHAPTER 1

INTRODUCTION

BACKGROUND

This Final Environmental Impact Statement (FEIS) is prepared in response to Sections 1001 and 1004 of the Alaska National Interest Lands Conservation Act (ANILCA) of December 2, 1980 (Public Law 96-487, 94 stat. 2371). Sections 1001 and 1004 of that Act direct the Secretary of the Interior to study and make recommendations for wilderness designation on all federal lands located north of 68 degrees north latitude, east of the western boundary of the National Petroleum Reserve-Alaska (NPR-A) exclusive of the Gates of The Arctic National Park and Arctic National Wildlife Refuge (ANWR). This area is referred to as the Central Arctic Management Area or CAMA and presently contains approximately 3,680,000 acres of federal land. The final wilderness report and recommendations are to be submitted to the President and Congress no later than December 2, 1988.

Section 1004 (c) of ANILCA designated the federal lands within CAMA to be a wilderness study area (WSA). All federal lands within CAMA, will be considered a single WSA. This WSA will be referred to as the CAMA WSA.

Because the CAMA WSA is defined simply as the federal lands within CAMA, land conveyances authorized by the Alaska Statehood Act and the Alaska Native Claims Settlement Act (ANCSA) have resulted in and will continue to result in changes in the size and configuration of the WSA. Consequently, the existing WSA is quite unlike the WSA as created by Congress in 1980.

LOCATION

All CAMA WSA lands are currently managed by the Bureau of Land Management (BLM), Arctic District, and are located on the north slope of the Brooks Range within the North Slope Borough, Alaska. CAMA WSA lands are shown on the CAMA Wilderness Study Area Map 1-1. Land status and acreages for CAMA are shown in Table 3.3.

NONWILDERNESS ASSESSMENT

Although the CAMA WSA covers all federal lands within CAMA, a wilderness assessment of lands within the Utility Corridor was approved in 1980 (U.S.Department of Interior, BLM, 1980). This assessment was conducted with full public participation. The assessment determined that approximately 316,000 acres of land within the Utility Corridor is nonsuitable for wilderness designation. This designated nonwilderness area roughly corresponds to lands visible from the Dalton Highway. Although these lands are included in the CAMA WSA they are not considered for wilderness designation under any alternative. Impact assessments of each alternative take into account the nonwilderness status of the Dalton Highway area.

"PLO 6607 CORRIDOR"

Technically, the CAMA also includes an area of approximately 48,000 acres which is surrounded by the Arctic National Wildlife Refuge (ANWR). An administrative decision has been made not to consider these lands as part of the CAMA WSA. This land was originally withdrawn as part of a utility and transportation corridor by PLO 5182 on March 16, 1972. The purpose of this corridor was to facilitate a proposed gas pipeline route into Canada. This land is no longer receiving consideration as a possible pipeline route.

On July 8, 1985, the Secretary of Interior issued PLO 6607 and notified Congress pursuant to Section 1326 of ANILCA. This action revoked the existing withdrawals on this land, withdrew the land from all forms of appropriation, and made it part of ANWR. On July 9, 1986, management of these lands was returned to BLM because Congress did not pass a joint resolution of approval in accordance with Section 1326 of ANILCA. However, the land remains segregated from all forms of appropriation under the land laws, including the mining and the mineral leasing laws.

This land continues to be suitable for inclusion into ANWR and legislation has been proposed to amend ANILCA to ratify PLO 6607 and place these lands within ANWR (H.R. 2629 as amended, Aug.3, 1987). While under management of the BLM, the land will be managed consistent with the Refuge Management Plan currently being prepared for ANWR, and will not be addressed further under this EIS. Figure 1.1 depicts the "PLO 6607 Corridor."

PURPOSE AND NEED FOR THIS ACTION

The purpose of the Proposed Action is to manage and preserve the wilderness characteristics on 41,000 acres of public land in the Arctic District. Approximately 3,323,000 acres would be released from consideration for inclusion in the National Wilderness Preservation System (NWPS) and placed under multiple use management by the BLM under the Proposed Action. An additional approximately 316,000 acres of CAMA WSA has already been determined nonwilderness in character (see above “Nonwilderness Assessment” section).

This FEIS assesses the environmental consequences of managing CAMA WSA lands under various wilderness alternatives.

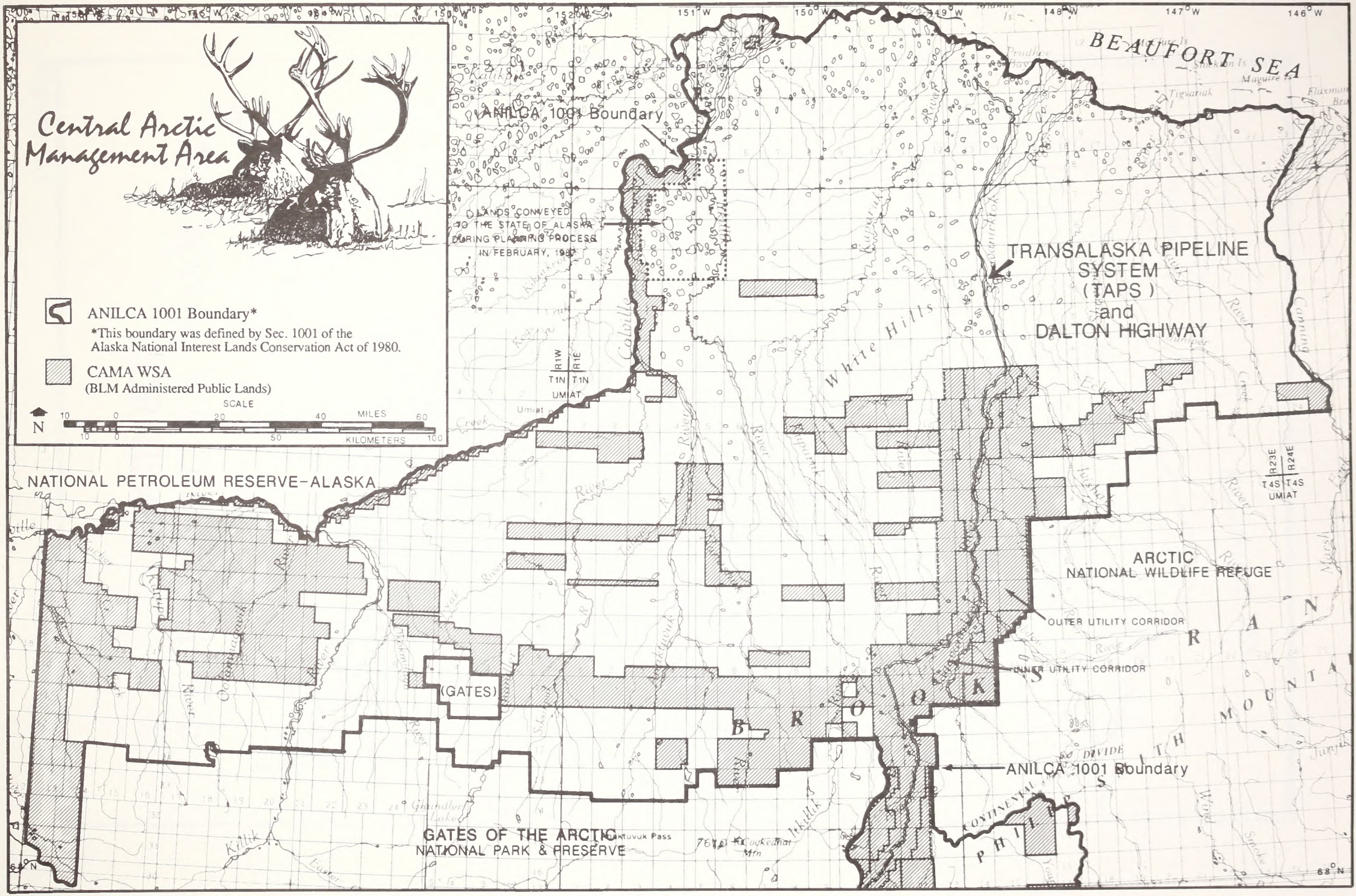
PLANNING PROCESS

The CAMA wilderness review and FEIS process were conducted in conjunction with the Utility Corridor Resource Management Plan (RMP). The draft RMP and the draft wilderness EIS were published together and released in draft for public comment on August 18, 1987.

The BLM’s Wilderness Study Policy as published February 3, 1982, (F.R. Vol.47, No.23) supplements BLM planning regulations by providing the specific factors to be considered in developing suitability recommendations during the planning sequence. These factors were used in determining the proposed action.

INTERIM MANAGEMENT

Until Congress acts, the BLM’s “Interim Management Policy and Guidelines for Lands Under Wilderness Review” (1979 as amended) serves as the principal guidance for managing the CAMA WSA lands in the Arctic District. The goal of the “Interim Management Policy” is to ensure that the wilderness qualities inherent to CAMA WSA lands remain unchanged until such time as the study process is completed and Congress acts on the wilderness recommendation. The nonwilderness assessment lands are an exception to the CAMA WSA Interim Management Policy, and will not be managed under provisions of that policy.


Central Arctic Management Area
ANILCA 1001 Boundary*
*This boundary was defined by Sec. 1001 of the Alaska National Interest Lands Conservation Act of 1980.
CAMA WSA
(BLM Administered Public Lands)
SCALE
MILES
KILOMETERS
N
BEAUFORT SEA
ANILCA 1001 Boundary
LANDS CONVEYED TO THE STATE OF ALASKA DURING PLANNING PROCESS IN FEBRUARY, 1987
TRANSALASKA PIPELINE SYSTEM (TAPS) and DALTON HIGHWAY
White Hills
NATIONAL PETROLEUM RESERVE–ALASKA
ARCTIC NATIONAL WILDLIFE REFUGE
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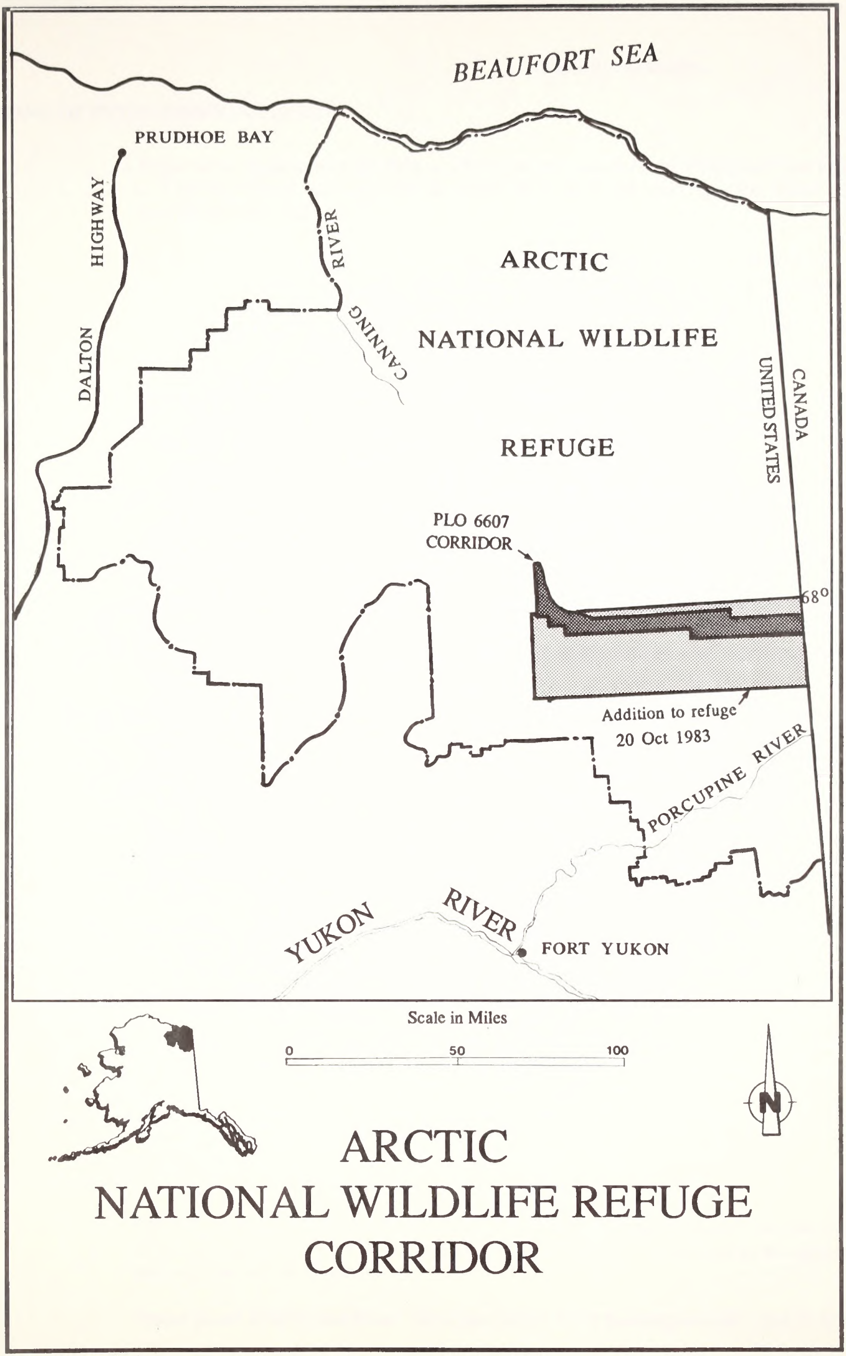
GATES OF THE ARCTIC NATIONAL PARK & PRESERVE
BROOKS RANGE
PHILIP SMITH MOUNTAINS
CONTINENTAL DIVIDE
Anaktuvuk Pass
R1W R1E T1N T1N UMIAT
R23E R24E T4S T4S UMIAT
Umiat
151° W
150° W
149° W
148° W
147° W
146° W
68° N

Map 1-1 Central Arctic Management Area Wilderness Study Area (CAMA WSA)



ARCTIC
NATIONAL WILDLIFE REFUGE
CORRIDOR

Figure 1.1

SCOPING OF ENVIRONMENTAL ISSUES

As part of the preparation of this FEIS, a scoping process was conducted through a review of pertinent laws and regulations, meetings with the public, BLM staff, and other agencies. Major issues for analysis were determined to be:

Impacts on Wilderness values: Wilderness values such as naturalness, opportunities for solitude and for primitive recreation, and identified special features could benefit from wilderness designation. The same values may be adversely affected by uses and actions that would occur should the WSA not be designated wilderness. The significance of these beneficial or adverse impacts is an issue for analysis in this EIS.

Impacts on Oil and Gas and Development: Wilderness designation could affect the development of potential and known energy (oil and gas) resources by withdrawing designated lands from the mineral leasing laws.

Impacts on Oil and Gas Transportation Routes: Wilderness designation could affect energy transportation system routes by withdrawing designated lands from use and occupancy. Eliminating transportation routes could affect oil and gas development opportunities on WSA lands and on adjacent National Petroleum Reserve-Alaska lands.

Impacts on Locatable Mineral development: Wilderness designation could affect the development of mineral resources by withdrawing designated lands from mineral entry. Development of existing mineral resources within designated wilderness areas could be affected by wilderness management restrictions.

Impacts on Big Game Wildlife and Habitat: Wilderness designation could benefit big game (i.e. caribou, moose, bear, Dall's sheep) by eliminating any surface disturbing activity which would disturb animals and their habitat. Conversely, big game wildlife and their habitat could be adversely affected from allowed uses and activities if the WSA lands are not designated.

Impacts on Recreational Off-Road Vehicle Use: Wilderness designation could eliminate the use of off-road vehicles (ORV's) on WSA lands. Eliminating this use could affect the availability of opportunities for ORV recreation and shift ORV uses currently occurring in the WSA to adjacent lands.

Impacts on Subsistence Use Patterns: Wilderness designation could benefit subsistence uses and resources on WSA lands by perpetuating the continuance of a subsistence lifestyle (living off the land). Conversely, subsistence uses could be adversely affected by uses and actions that could occur should the WSA lands not be designated wilderness.

Impacts to Socioeconomic Conditions: What will be the impact to the area's future employment, income, population, and public revenues as a result of wilderness designation or nondesignation.

These impact topics will be used to organize and guide the impact analyses in Chapter 4, the "Environmental Consequences" Chapter.

ISSUES CONSIDERED BUT NOT ANALYZED

The following issues were identified in scoping, but were not selected for detailed analysis in this "Final CAMA Wilderness Study Area Environmental Impact Statement". The reasons for setting these issues aside are also discussed below.

Impact on Air Quality Standards: All of the CAMA WSA is managed under Class II Air Quality

Standards according to the BLM's Wilderness Management Policy (Federal Register, Vol. 47, No. 23, Feb. 3, 1982). This classification permits moderate deterioration associated with controlled development and growth. Unless the State of Alaska initiated such action, this classification would not change due to designation or nondesignation of an area as wilderness. Redesignation would require further environmental assessment prior to such action.

Impact on State and Private Inholdings: The issue of how wilderness designation or nondesignation would affect state or private lands or nonfederal mineral inholdings was identified in scoping. Uses on these lands would not be required to change as a result of designation or nondesignation. BLM is also required to allow access to inholdings in a designated wilderness. Inholdings are considered valid existing rights and wilderness designation would not directly affect those rights.

Impacts to Future Land Selections/Conveyances to the State of Alaska: Title X of ANILCA directs the Secretary of the Interior to conduct a wilderness study of BLM lands within CAMA. Section 1001(f) of ANILCA states that "Nothing in this Title [Title X] shall be construed as impeding, delaying, or otherwise affecting the selection and conveyance of land to the State pursuant to the Alaska Statehood Act, or any other Federal law referred to in Section 102 (3) (A) of this Act,. . ." Therefore, selection and subsequent conveyance of CAMA WSA land to the state will not be impeded as a result of wilderness recommendations considered in this document.

Impacts on Land Entitlements Authorized by the Alaska Native Claims Settlement Act (ANCSA): The time period has passed for Native corporations to select lands to satisfy land entitlements granted by ANCSA. Future conveyances of validly selected lands to the Native corporations will not be impeded as a result of wilderness recommendations.

Impact on Cultural Resources: There are several archaeological sites, ranging in age from historic to 10,000 years old, located on CAMA WSA lands. However, WSA lands considered for wilderness are relatively remote and inaccessible. Adequate protection to archaeological sites located on WSA lands would be provided with or without wilderness designation through existing laws such as the National Historic Preservation Act of 1966 (as amended) and the Archaeological Resource Protection Act of 1979. Because the management of cultural resources would not vary significantly, with or without wilderness designation, the issue of impact to cultural resources was dropped from further consideration.

Impact on Riverine Water Quality: The impact on riverine water quality was considered as an issue. However, this concern was dropped from further consideration because the fragmented pattern of federal ownership places the majority of most drainages on private or state lands not under BLM administration. Furthermore, water quality is protected and regulated by the state of Alaska Department of Environmental Conservation (DEC).

Impact on Threatened and Endangered Species: Presently the peregrine falcon is the only threatened and endangered (T&E) species known to inhabit the CAMA WSA. The Eskimo curlew, also on the T&E list, has not been observed within Arctic Alaska since the late 1800's. The peregrine falcon is protected by the Endangered Species Act; several migratory bird treaties with Mexico, Russia, and Canada; and other legislation by the state of Alaska. Wilderness designation of areas inhabited by this species is not expected to provide significant additional protection from direct physical disturbance of individual birds or their nest sites.

Prey base habitat and migratory routes are not specifically protected by existing laws; wilderness designation of these areas could provide additional protection for this species' habitat. However, much of this habitat is private or state owned and not available for inclusion in the National Wilderness Preservation System. Therefore, wilderness designation would not be of a major benefit to the species.

Protection of Fisheries and Raptor Habitat on the Colville River: The Colville River downstream of Umiat has been determined navigable and thus belongs to the State of Alaska. Important fisheries use areas on the Colville River are therefore not part of the WSA. Raptor habitat along the Colville River is within the WSA, however, due to the presence within these areas of the peregrine falcon they would receive the protection afforded by the Endangered Species Act. Wilderness designation is not expected to provide significant additional protection from direct physical disturbance of individual birds or their nest sites.(see above section on T&E species).

Additionally, protection of wildlife resources on the Colville River is appropriately considered through activity planning. The Utility Corridor Resource Management Plan recommends developing a habitat management plan (i.e. an activity plan) for that area. The habitat management plan will determine proper land and resource use in the area.

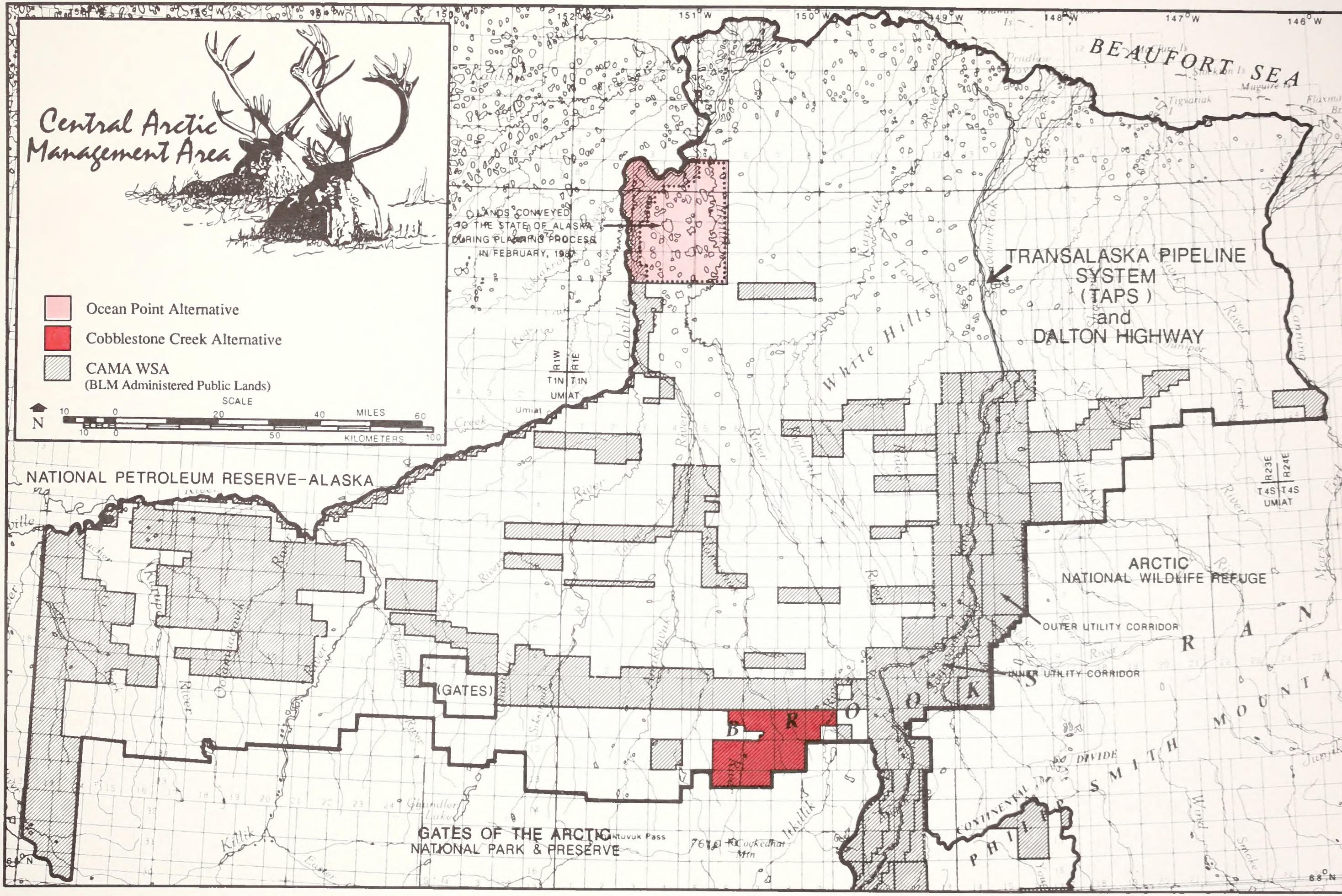
ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED ANALYSIS

Ocean Point Alternative (300,000 acres)

This alternative considered for wilderness designation a block of land, referred to as the Ocean Point block, located adjacent to the Colville River north of Umiat, see Map 1-2. The Ocean Point block exhibits high wilderness values including a unique arctic riverine-lake-marsh ecosystem. All of the lands under consideration in this alternative were selected by the State of Alaska. During the early scoping and alternative formulation period, two-thirds of the lands within this block were transferred to the State of Alaska and thus were not available for inclusion in the National Wilderness Preservation System. The remaining one-third was subsequently transferred to the State of Alaska during the public comment period for the Draft EIS (October 1987).

Cobblestone Creek (157,000 acres)

This alternative considered for wilderness designation a block of land, referred to as the Cobblestone Creek block, located just west of the Utility Corridor and adjacent to Gates of the Arctic National Park, see Map 1-2. This area is similar to adjacent National Park lands and is characterized by rugged mountains, excellent wildlife viewing, and excellent wilderness characteristics. However, Sec. 1431(e) of ANILCA describes the most important portion of this block of land and states that if said lands are not conveyed to Arctic Slope Regional Corporation (ASRC) they "shall become, and be administered as, a part of the Gates of the Arctic National Park; . . ." Therefore, these lands will either become part of the Park or will be conveyed to ASRC. In either case, they will no longer be part of the CAMA WSA as defined by ANILCA and thus not within the scope of this plan for wilderness consideration. The majority of the subsurface estate within the Cobblestone Creek block has already been conveyed to ASRC.


Central Arctic Management Area
Ocean Point Alternative
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R23E R24E T4S T4S UMIAT
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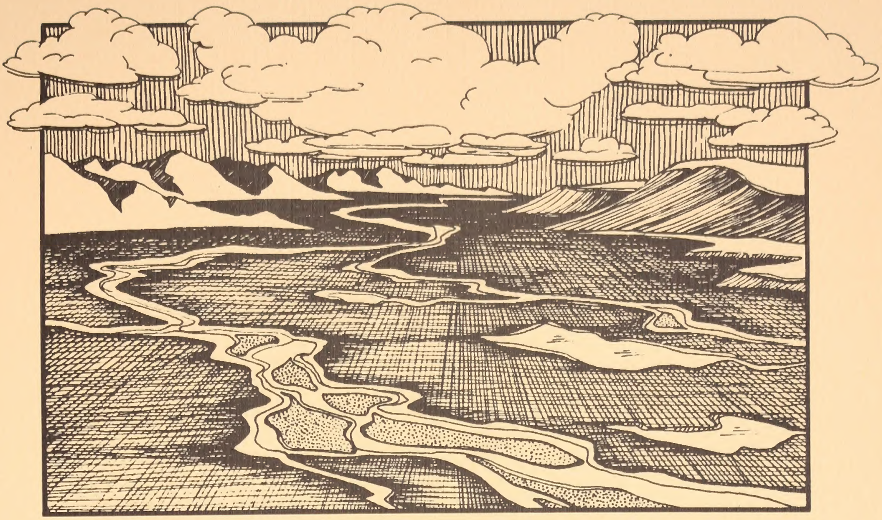
Map 1-2 Wilderness Alternatives Considered but Eliminated from Detailed Analysis



Chapter 2
Proposed Action and Alternatives

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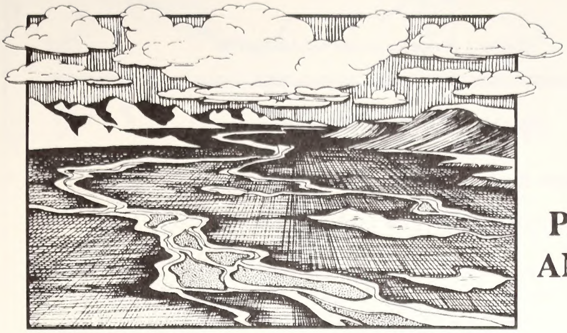


CHAPTER 2

PROPOSED ACTION AND ALTERNATIVES

INTRODUCTION

Preface

This chapter describes important BLM management actions relating to several key resources and the anticipated level of land use activities occurring as a result of these actions for five alternatives. Reasonable assumptions and development scenarios have been developed to allow more meaningful analysis of impacts. These assumptions and scenarios are based on the management actions that are anticipated to take place under each of the alternatives. Descriptions of management actions provided in this chapter focus on actions on CAMA WSA lands being considered for wilderness designation. Actions and activities within the nonwilderness assessment area (reference Chapter One) are identified where appropriate. At the end of this chapter is a summary table that compares the impacts of the five alternatives.

Land Status

Under the Alaska Statehood Act and the Alaska Native Claims Settlement Act (ANCSA) approximately 149 million acres of land entitlement was granted to the State of Alaska (105 million acres) and Alaska Natives (44 million acres). Although the selection period for Native corporations has expired the conveyance process has not been completed and is expected to continue for many years. At this time the Arctic Slope Regional Corporation (ASRC) has approximately 970,000 acres of selected land within the WSA; the state has approximately 1.5 million acres of selected or top-filed lands within the WSA. At the present time the State is approximately 20 million acres short of its entitlement and may be "underselected". The State of Alaska has until 1994 to select additional lands.

Although no conveyances are expected before December of 1988, it is expected that some CAMA WSA lands will be conveyed to ASRC or the State in the future. Indeed, it is possible given existing selections, remaining entitlements, and existing withdrawals that a third or more of the WSA will leave federal ownership.

However, as the amount of land available for selection and conveyance decreases, remaining entitlement diminishes, and the 1994 deadline for selection draws near, the state is attempting to identify only the most valuable federal lands for future selection and conveyance. As part of this effort the state is asking that federal withdrawals preventing state selection be closely reviewed and removed wherever possible (e.g. revocation of the Utility Corridor withdrawal has been requested). The State has also begun discussions with BLM indicating a willingness to relinquish certain selections to allow consolidation of federal and state landholdings throughout the state. Consequently, future conveyance of remaining federal lands within CAMA may not follow the current pattern of land selections and withdrawals. WSA lands now closed to selection may be opened (e.g. portions of the Utility Corridor) and existing selections may be relinquished. Therefore, for purposes of analyses this document will "freeze" the configuration and size of the WSA as it now exists.

PROPOSED ACTION

41,000 Acres Recommended for Wilderness Designation

3,639,000 Acres of Nonwilderness

The Proposed Action recommends 41,000 acres of land in the southwest portion of CAMA adjacent to wilderness lands managed by the National Park Service as suitable for wilderness, designation, see Map 2-1 (also Appendix D), and 3,639,000 acres as nonsuitable. Those lands recommended as nonsuitable would be made available for other multiple-use management and development as specified in the *Draft Utility Corridor Resource Management Plan* (U.S Department of Interior, BLM, 1987) and subsequent plans. Following are brief summaries of the actions and activities significant to the issues that would take place under this alternative.

LOCATABLE MINERALS

Management Actions

Subject to valid existing rights, the 41,000 acre Nigu block designated as wilderness under this alternative would be closed to mineral entry and location.

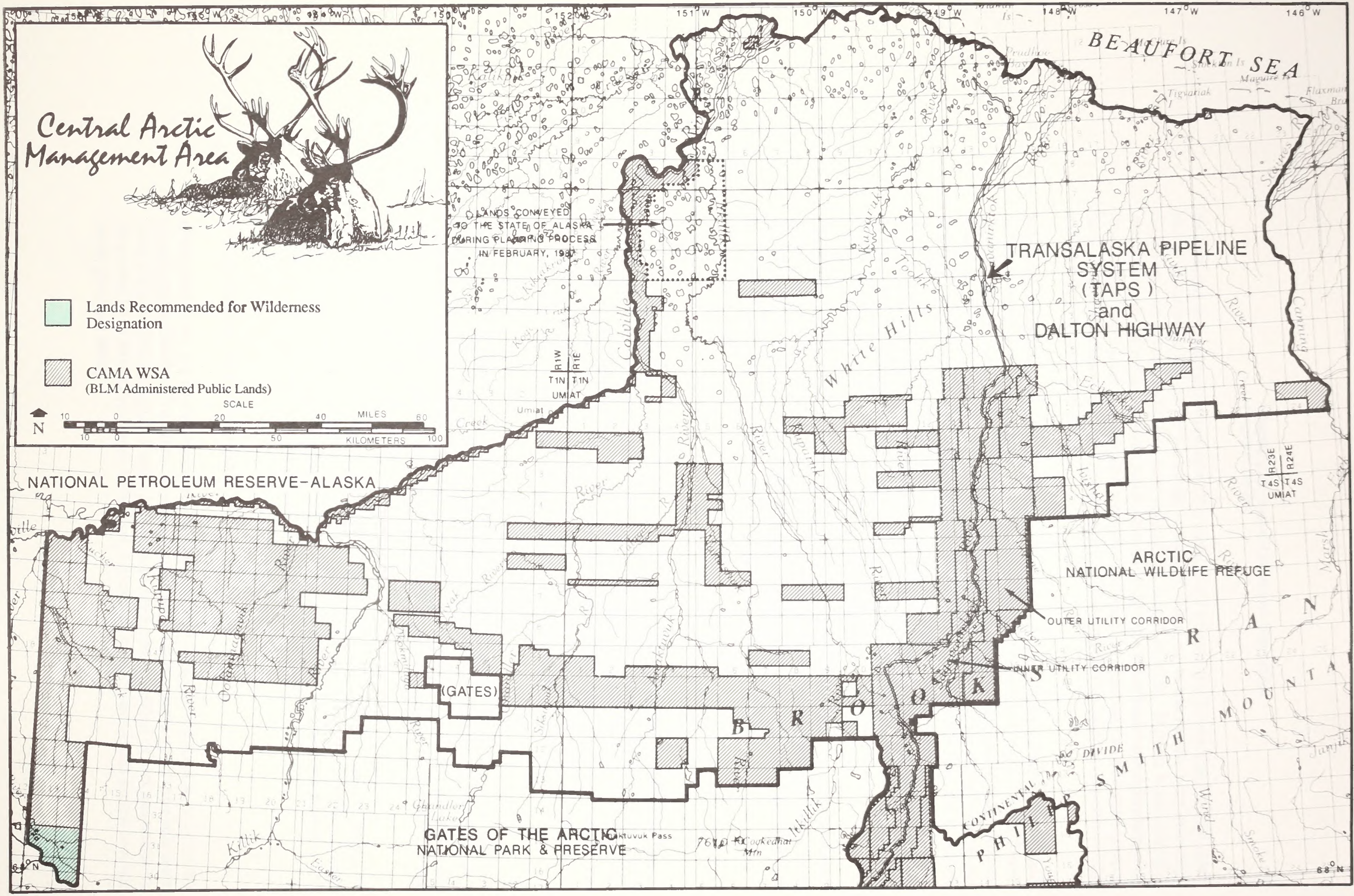
Of the remaining 3,639,000 acres of land within the CAMA WSA, 274,000 acres of subsurface estate is owned by Arctic Slope Regional Corporation (ASRC). It is not anticipated that this subsurface will be returned to the federal government. Consequently, these lands will not be opened to development under the U.S mining laws. However, these lands would be available for locatable mineral development under ASRC ownership . Also, 540,000 acres of land within the "inner Utility Corridor" presently closed to hardrock mineral development would be opened to development as energy resources on the north slope are depleted and the need for protecting future pipeline routes through the area disappears. Hence, in the future all CAMA WSA lands outside the proposed 41,000 acres of designated wilderness would be open to hardrock mineral development.

Anticipated Activities

Currently, no mining claims exist within the proposed wilderness area, therefore no mining activity could occur. On nondesignated WSA lands mineral development of potentially occurring hardrock minerals (i.e. lead-zinc) is unlikely due to the area's remoteness, lack of access and infrastructure, and availability of substantial lead-zinc deposits elsewhere (e.g. at Red Dog and LIK Properties in western Alaska where access is better). The potential for discovery of a developable gold deposit is low.

In January of 1987 there were 19 properly located and maintained mining claims within the WSA. By May of 1988, there were 13 claims remaining. The majority and perhaps all of these remaining claims are expected to be closed in the near future as no discovery of minerals is known to have occurred. However, given the access provided by the Dalton Highway a developable gold deposit could be discovered in the approximately 275,000 acres of moderate potential land in the Brooks Range in and near the Utility Corridor south of Toolik Lake.

Since the likelihood of finding an economic gold deposit is low, development would probably be limited to one placer gold operation (anticipated to involve 12 claims). Assuming a three to four man operation, this would result in 5 acres of *annual* surface disturbance within a 20 acre claim. This disturbance would be a result of the construction of buildings, stripping, processing, and tailings disposal typical of a placer operation. Reclamation efforts would be required annually of all areas not required for ongoing operations. However, reclamation efforts, which would recontour the land and revegetate the surface, could not completely restore the land to its natural state. Over the course of 3 to 5 years, most of a 20 acre claim (approximately 15 acres) would likely



Central Arctic Management Area
🟩 Lands Recommended for Wilderness Designation
▨ CAMA WSA (BLM Administered Public Lands)
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150° W
149° W
148° W
147° W
146° W
68° N

Map 2-1 Proposed Action

be disturbed and undergo reclamation. The remaining 5 acres of the 20 acre claim would either not be disturbed at all, due to the terrain or lack of values, or would receive only incidental disturbance from foot traffic, one time vehicle passes and so forth. Impacts from incidental disturbance would be of a short term nature. In total 15-20 acres would be disturbed per claim over the course of 3 to 5 years. As the claim is mined out it would be expected that new claims would be worked on the discovery stream. Eventually 12 claims could be assumed to be worked along a three mile long section of stream.

In addition to the disturbance on the claims, an access road of approximately 4 miles in length and 10 feet in width would be expected. Equipment and supplies would be brought in over frozen ground during the winter. The roadbed (including turnouts) would occupy approximately 5 acres. Road improvement would usually be done as required using available mine tailings. Due to the 1) soft wet soils, 2) inhospitable environment, 3) low speeds and volume of traffic, and 4) closure of BLM lands to summer recreational ORV activity, incidental disturbance adjacent to the road from dust, garbage and off-road "exploring" would be quite limited and amount to less than half an acre. Total disturbance along and adjacent to a four mile road would therefore be expected to be less than 6 acres.

In total this operation would result in "primary disturbance" (reclaimed) of 180 acres, incidental disturbance of an additional 60 acres and new road disturbance of approximately 6 acres (road extensions to new claims would go over previously disturbed areas). Total disturbed area during the life of the operation as described would be approximately 250 acres.

ENERGY RESOURCES

Management Actions

Approximately 3,365,000 acres of CAMA WSA lands would be opened to *federal* mineral leasing. Closed to federal leasing would be the 41,000 acres of proposed wilderness and 274,000 acres of split estate lands owned by Arctic Slope Regional Corporation (ASRC). These split-estate lands are not likely to be returned to the federal government. However, oil and gas development would likely be encouraged by ASRC. Hence, 3,639,000 acres of WSA lands would be made available for oil and gas leasing and development (federal or ASRC).

Anticipated Activities

No oil and gas leases currently exist on any CAMA WSA lands. Presumably, all high and moderate potential lands would be leased in the future and additional geophysical and exploratory work would take place. Approximately 3,330,000 acres of CAMA WSA lands, all outside the proposed wilderness boundary, are considered to have high potential for oil and gas occurrence (all other lands are of low potential).

Leasing on the 3,330,000 acres of high potential lands would result in several phases of development: geological and geophysical (principally seismic) exploration; exploratory drilling; development drilling; and construction of all-season roads, oil transmission pipelines and production facilities; and eventually abandonment and reclamation.

Geological and Geophysical Exploration

Geological surveys or studies during the snow free months would be expected to occur on the nondesignated CAMA WSA lands. These surveys are brief: the investigators arrive by helicopter, study and measure geological sections, perhaps take a few "grab samples" of rock and remain on the ground for at most a few hours. Noise from the helicopter during arrival and departure would be the principal effect.

Geophysical (seismic) exploration would be expected over most of the nondesignated lands. Seismic survey activity within the CAMA WSA has occurred in the past. Such activity is dependent on several interrelated factors and has been episodic in nature. In 1987 (the only seismic work in the last 5 years), approximately 500 miles of seismic lines were run on CAMA WSA lands. Future seismic examinations on the 3,330,000 acres of high potential WSA lands would be expected to occur with an average of 500 miles of line run annually.

To minimize surface disturbance, seismic surveys would be conducted during the winter months, usually between December 1 and June 1, when the ground is frozen (to a depth of approximately 12 inches) and adequate snow cover exists (approximately six inches). Seismic data would be obtained using the vibroseis technique. This technique employs the use of a special vehicle that literally vibrates on top of the ground sending sound waves down to be reflected back to receiving stations. Seismic trains are generally routed through terrain where it is easier to move equipment, so potential for surface damage is minimized even though the routing may not provide the shortest travel distance. Gently sloping banks would be selected for the entry and exit to all stream crossings, to reduce equipment strain and avert bank damage which could cause erosion and stream siltation. This is very important on CAMA WSA lands that lie on the flatter topographic relief areas of the foothills and coastal plain where streambanks are steep along many drainages.

Seismic trains use about 2,000 gallons of water daily for domestic purposes. Where available, crews obtain water from lakes that do not freeze to the bottom. When such lakes are not available, a small snow or ice melter is used to obtain domestic water supplies. Minor amounts of local noise and air pollution result from equipment operation, these effects are brief and transitory. Minor fuel spills could also occur.

No ice roads or airstrips would be constructed to support seismic operations. Light, fixed-wing aircraft would be used for resupply and would land on 2,000 foot-long ice airstrips scraped on the nearest lake or pond. Occasionally, ski-equipped aircraft that can land on the snow-covered tundra would be used if there are no lakes nearby.

Exploratory Drilling

Based on past drilling activity on CAMA lands adjacent to the WSA, it is estimated that about 30 exploratory wells would be drilled on nondesignated WSA lands over a 30 year period. Exploratory drilling is a large scale operation that requires heavy construction equipment to prepare the well site and to construct an airstrip large enough for Hercules C-130 aircraft. Activities associated with exploratory drilling would be confined to a localized area and allowed only during the winter (usually between November 15 and May 15) with adequate "freezedown" and 6 inches of snow cover. Construction equipment needed for initial site preparation would be brought in overland by low-ground pressure vehicles. The airstrip would usually be located on a nearby frozen lake or if this was not possible it would be constructed over level tundra by applying layers of water over the snow cover with specially designed trucks until a minimum ice thickness of 12 inches was obtained. The drilling rig and the ancillary equipment are massive, usually requiring 110 to 180 C-130 loads, depending on the size of the rig. Roads between the airstrip and well site would be routed over frozen lakes where possible or over constructed ice roads. Drilling rigs must be set on a firm foundation, usually pilings not susceptible to differential settlement (recently a drilling rig was successfully placed on an ice pad). Most exploratory drilling operations could be completed in one season. If an operation could not be completed in one season operations would be suspended until the subsequent winter and ice roads, airstrips, etc. would be reconstructed to the extent necessary.

A typical drilling pad would be approximately 600 by 700 feet and would cover about 10 acres of land. Within the pad would be located the drilling rig, camp facilities for 50 - 75 people, support equipment, and drilling supplies. Also located within the pad adjacent to the well would be a reserve pit 10 to 20 feet deep, about 200 feet wide, and 300 to 400 feet long. This pit would contain used drilling muds and cuttings and would also be used to contain fluids in the event of a "blowout."

If a suitable lake for an airstrip could not be located near the drill site, as much as 15 million gallons of water may be needed for one exploration well. Approximately 7 to 8 million gallons of water would be required for construction of an ice airstrip over the tundra. Approximately 2 million gallons of water would be required for actual drilling operations and domestic use. Ice road construction and maintenance would require approximately 1.5 million gallons of water per mile (U.S. Department of Interior, USFWS, 1987).

After the drilling operation was completed and the well abandoned, dismantlement of the drilling rig and camp would begin immediately. Removal or securing of the equipment for movement to the next well site would be completed within several weeks. During the following summer final cleanup of remaining debris would be accomplished and rehabilitation checked.

After a discovery from exploration drilling, several other wells would be drilled in a similar manner. These wells would determine the size and characteristics of the reservoir. If the results of this drilling indicate economic recovery was possible production would occur.

Production and Development

The following description of production and development activities is broken into two parts. The first part is a general description of the type and nature of activities associated with oil and gas development and production on the north slope. The second part applies information contained in part one and describes the anticipated activities specific to this alternative.

Part One: General Description

If an economic field were discovered in CAMA, development and production activities would begin on a year-round basis. Proposed plans for the production and transportation facilities would be developed during the economic study of the discovery and submitted to local, state, and federal agencies for approval. After completing the required review process, the plans would either be approved or denied, pending further information, studies, and/or modifications. Once approved, the construction of permanent production facilities, drilling/production pads, air support facilities, roads, and pipelines would begin. The first activity would be a temporary camp to support workers who would construct the permanent pads, connecting roads, airport facilities, and a main road between a staging area and the producing field. Selection of the staging area depends on the location of the field, economic and environmental factors, and lease stipulations issued by government officials. Once the main road was completed, the permanent camp and production facilities would be transported to the field and assembled on site. These modules are designed to last the life of the field. Depending upon the size of the field and the reservoir characteristics, the expected life of the field would be from fifteen to thirty years.

Table 2.1 summarizes the total acres of direct (primary) disturbance and gravel required for hypothetical small and large development projects. Drilling and production pads and gravel pits (assuming 10' pit) used in the small-scale scenario (8,000 acre development field) would disturb a total of approximately 400 acres. Under the larger scenario (23,000 acre development field) pads and pits would disturb a total of approximately 1,000 acres. Once the hydrocarbons are depleted

Table 2.1
Acres and Gravel Requirements for Hypothetical Prospect at Depths of 7,500 and 15,000 Feet.

Prospect Area *	Depth of Field	Description	Acres Disturbed	Gravel Needs**
8,000 Acres	7,500 ft.			
		Central Production Facility (1)	50	440,000
		Drilling/Production Pads (4)	40	240,000
		Airstrip and Facilities (1)	35	300,000
		Roads and Pipelines (30.3 miles)	152	1,212,000
		Gravel pit(s) at 10' depth	136	
		Total	413	2,192,000
23,000 Acres	15,000 ft.			
		Central Production Facility (2)	100	880,000
		Drilling/Production Pads (5)	90	240,000
		Airstrip and Facilities (1)	35	300,000
		Roads and Pipelines (90.5 miles)	450	3,620,000
		Gravel Pit(s) at 10 ' Depth	312	
		Total	987	5,040,000

* Total surface area of prospect
** In cubic yards.

from the prospect, the wells would be plugged and abandoned, the facilities would be removed, and the disturbed surface would be reclaimed in compliance with federal regulations.

Facilities needed to produce oil and gas would be the central production facility, drilling/production wells and production manifolds, airstrip, pipelines, and roads.

The Central Production Facility (CPF) would be the headquarters and primary operations center for the production activities of the field. Although one CPF is shown in the smaller scenario and two in the larger scenario, surface and subsurface conditions may require more to adequately process the oil and gas. Gravel pads needed to support housing and production modules would be five feet thick and cover 40-60 surface acres. Necessary modules would be built on pilings to ensure foundation integrity for the life of the project. Gravel needed for the construction of the production facility pad would probably be mined near the field.

Housing modules include sleeping and eating quarters, a food storage area, and recreation and sanitation facilities. The modules are designed to accommodate 150-300 workers. Adjoining offices house administration, engineering, communications, and other support services.

Production facilities include the equipment necessary to process the crude oil into salable oil and usable gas and to transport it to the Trans Alaska Pipeline System (TAPS). This process begins by separating the production fluid into oil, gas, and water. Oil would be dehydrated and piped to TAPS. Produced gas would most likely be dehydrated and compressed for use at the production facility or reinjected into the subsurface to maintain field pressure. Presently, a gas pipeline is proposed to be built from the Prudhoe Bay field to a port facility in southcentral Alaska. Should this pipeline system be in place at the time of pipeline construction through CAMA, some gas could be sold and transported to market. Produced water is pumped to injection wells for enhanced recovery of the oil or for disposal.

Water for domestic use would be obtained from local lakes or water-filled pits (abandoned gravel source areas). Insulated tanks could store a sufficient amount of potable water for human consumption. Sewage treatment and incinerator facilities would eliminate most of the human waste and trash. Items which could not be burned would be transported to an approved disposal site.

Fuel storage would hold diesel and other refined petroleum products necessary for operating this equipment. The area would be diked to contain any spills which may occur. Electricity could be provided by a diesel powered generation plant.

Drilling rigs and support modules would be the first pieces of equipment located on drilling and production pads. As wells were completed, wellheads, pipelines, and the production manifold would be put in place. The size of these pads depends on the number of wells drilled and the distance between wellheads. In the smaller scenario, four pads are shown to cover 10-15 acres. The larger scenario requires five pads covering 15-20 acres. All pads would be five feet thick, requiring 60,000 to 100,000 cubic yards of gravel.

Depending on proposed depth and subsurface conditions, production wells would take 10-60 days to drill and complete. Production from each well would be piped to the production manifold where it would be metered and piped to the central production facility.

Most production wells are directionally drilled from the pads to various locations within the hydrocarbon reservoir. This procedure allows maximum depletion of the reservoir and minimizes the surface acreage disturbed. Unusable drilling muds and cuttings would be stored in reserve pits located on the pad.

Figure 2.1 provides a visual display of a typical north slope directional drilling procedure located on a drill pad. As many as 20 to 30 well heads could be placed on a ten acre drill pad and 25 to 35 on a fifteen acre drill pad. Figure 2.2 provides a hypothetical development layout.

Airstrips would be permanent and maintained year-round for the lifetime of the project. Minimum length of the airstrip would be 6,000 feet, minimum width 150 feet. Twenty acres of surface would be covered by the airstrip itself and another 10-15 acres required for the taxiway, apron, and support facilities. Approximately 250,000 to 300,000 cubic yards of gravel would be required to construct this pad.

Roads would connect all of the above facilities. They would be built with a crown width of 35 feet and would be five feet thick. Each mile of road would cover five acres of surface and require 40,000 cubic yards of gravel. Total road mileage varies between projects, depending on the size and surface features of each prospect.

Gathering lines would run from each production pad to the central production facility. One line transports the crude oil to the facility and a parallel set of lines would transport the gas and water from the facility to the production pads for fuel, injection, or disposal. These pipelines would be buried if possible, but are usually placed on steel vertical support members. Pipe diameters range

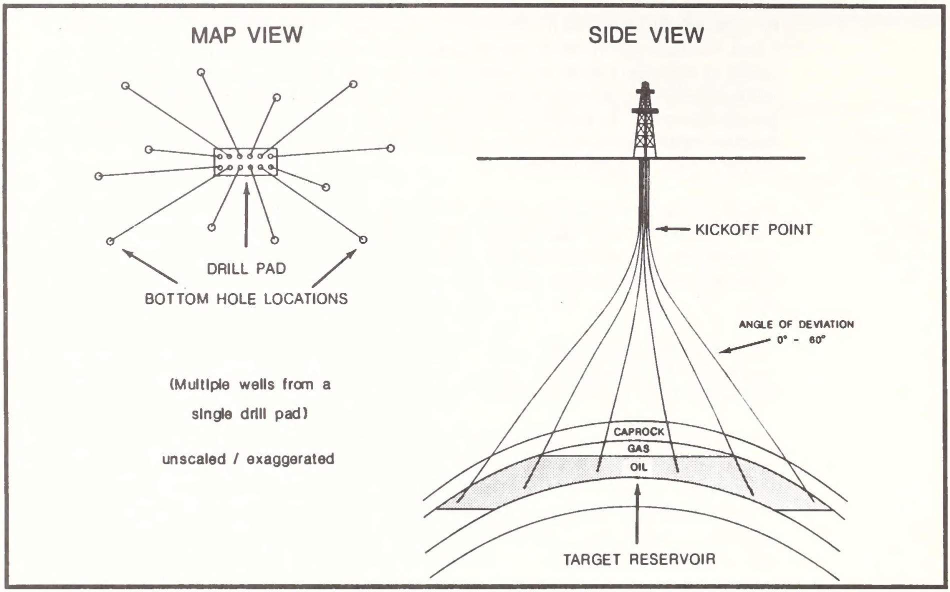


Figure 2.1 Typical North Slope Directional Drilling Procedure.

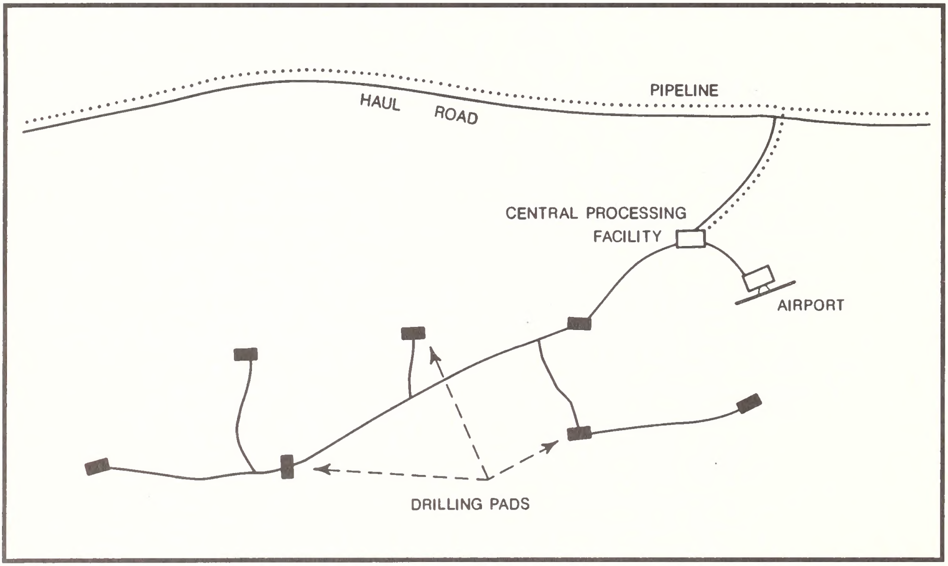


Figure 2.2 Hypothetical Development Scenario

from three to twelve inches. Pipelines would most likely be placed parallel to the roads.

The main production pipeline leaving a field would be 16-24 inches in diameter and would be placed on five foot elevated vertical support members (VSMs). Winter construction would be likely to reduce surface disturbance. The pipeline would run parallel to the road connecting the field directly to TAPS or other nearby producing fields. If fields within CAMA are developed before fields on adjacent lands, the most economical and shortest route to TAPS would be used with use of federal lands maximized to the extent possible.

As more oil fields are developed under arctic conditions, engineers will design improved and less expensive methods of pad construction, drilling procedures, refining processes, and transportation systems. This will not only reduce the described surface acreage disturbed, but it will also improve the economics, and promote development of the Arctic's smaller oil fields.

Part Two: Proposed Action Oil/Gas Development Scenario

Under the Proposed Action, there is a moderate potential that recoverable oil and gas discoveries within CAMA (on federal,state or private lands) and within NPR-A would result in actual oil and gas development. Impacts to CAMA WSA lands would be the result of exploration, field development and associated pipeline construction across CAMA to the Trans Alaska Pipeline System (TAPS). The likelihood of development actually occurring is unknown and could not be accurately projected without extensive analysis. However, comparing CAMA with the Arctic National Wildlife Refuge (ANWR), located just east of CAMA, allows us to put the likelihood of finding economically recoverable oil into perspective. There is a 19% chance that economically recoverable oil occurs in the ANWR 1002 area. This area is the "Nation's best single opportunity to increase significantly domestic oil production. It is rated by geologists as the most outstanding petroleum exploration target in the onshore United States" (U.S. Department of Interior, USFWS, 1987, p. VII). Therefore, it is concluded that the likelihood of discovering economically recoverable oil in CAMA is less than 19%.

Should it occur, oil and gas development which would impact CAMA WSA lands is equally likely to take place along three different pipeline corridors or routes, see Figure 2.3. For purposes of analysis, it is assumed that all three of these pipelines and associated development would occur under this alternative.

The following pipeline routes and associated development are not intended to represent specific alignments. They display routings in only the most general sense. Specific alignments and alternatives to these alignments will have to await a more detailed study of route terrain, soils, and vegetative and biological resources. These alternatives will be considered as part of a detailed environmental impact statement submitted with any routing proposal before any federal rights-of-way are granted.

Furthermore, each of the pipeline routes described below reflect assumptions concerning the sequence or pattern of oil discovery in the region. They also reflect the known or potential oil reserves within CAMA or on lands adjacent to CAMA. Hypothetical alternatives to these pipeline routes could exist under different assumptions for patterns of discovery and development. The development scenario and hypothetical pipeline routes described here are limited strictly to known hydrocarbon resource potential and to the assumption that oil development will occur first in the northernmost sections of CAMA and much later in the southern and western sections. The only exception to this would be development within the Utility Corridor itself. Development at any location within the Utility Corridor would be economic, even with lower proven reserves, due to nearness to the existing TAPS.

Route A (and associated development:) Route A represents a pipeline for transportation of oil produced in the National Petroleum Reserve-Alaska (NPR-A) and would connect with TAPS at or near pump station 2. It reflects the possibility for development of potential discoveries in the northern half of the imbricate fold belt. The nearby Umiat field adds to the likelihood of this route since it contains estimated reserves of 70-100 million barrels of oil. NPR-A is estimated to contain as much as 5.9 billion barrels of oil in place and 11.3 trillion cubic feet of natural gas (Gryc, 1985).

This anticipated pipeline would cross approximately 24 miles of CAMA WSA lands and 60 miles of private (ASRC) and State lands. No associated oil field development is anticipated to occur within the WSA. The main field(s) would be within NPR-A and a smaller discovery(s), developable once the infrastructure is in place, would most likely occur on State land. Temporary construction camps would likely be located on State land, within NPR-A, or on existing pads within the nonwilderness area of the Utility Corridor. Therefore direct "primary" surface disturbance of WSA lands would be limited to approximately 120 acres from the actual construction and placement of the pipeline and roads, and approximately 60 acres from the excavation of necessary gravel pits. Direct "secondary" surface disturbance, primarily the result of dust and gravel spray along roads, is expected to be limited to 100 feet either side of roads and affect approximately 580 acres of land.

Total direct primary surface disturbance of WSA lands under Route A development would be approximately 180 acres; total direct secondary disturbance would be approximately 580 acres (also see Table 2.2).

Route B (and associated development): Route B reflects the probable need for oil transportation from potential discoveries in the southern half of the imbricate fold and thrust belt plays within CAMA as well as from NPR-A.

The anticipated pipeline would cross approximately 124 miles of CAMA WSA lands and about 43 miles of State and private (ASRC) land. Oil field development associated with this pipeline is anticipated to occur within the WSA and on adjacent lands. The main field(s) would be within NPR-A or within the western portion of the WSA. It will be assumed for purposes of this document that a large field would be developed within the extreme western portion of the WSA. Smaller discoveries, developable once the infrastructure is in place, would be located on State or private land along the pipeline route. A portion of the pipelines and access roads needed to transfer oil from these smaller fields to the main pipeline to TAPS would also cross the WSA (approximately 6 miles). Direct "primary" surface disturbance to WSA lands would be approximately 680 acres from the construction of facilities at a large oil development project and approximately 650 acres from the construction of the main Route B pipeline/road to TAPS and "feeder" lines. In addition, it is anticipated that within the WSA along the main pipeline route at least one pump station requiring approximately 40 acres (350,000 cu. yds of gravel) and one temporary construction camp and airstrip requiring approximately 80 acres (540,000 cu.yds of gravel) would be needed. Approximately 690 acres of primary surface disturbance would result from excavation of gravel pits (assuming a 10 foot depth). Direct "secondary" surface disturbance, primarily the result of dust and gravel spray along roads, is expected to be limited to 100 feet either side of roads and affect approximately 5,370 acres of land.

Total direct primary surface disturbance of WSA lands under Route B development would be approximately 2,140 acres; total direct secondary surface disturbance would be approximately 5,370 acres (also see Table 2.2).

Route C (and associated development): Route C reflects the potential need for the transportation of fluid minerals to the Trans-Alaska Pipeline from within the Utility Corridor. Proximity to

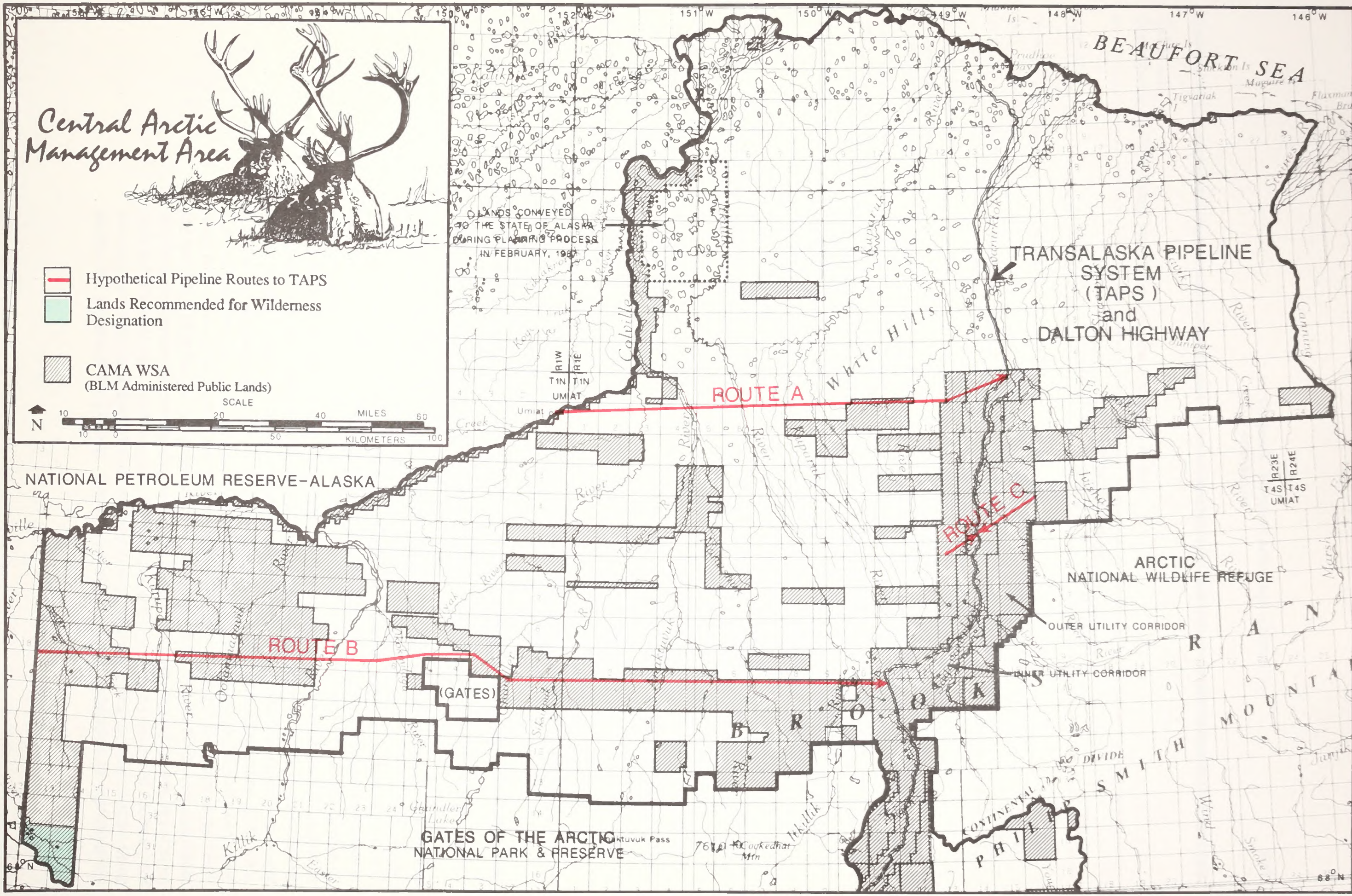

Central Arctic Management Area
Hypothetical Pipeline Routes to TAPS
Lands Recommended for Wilderness Designation
CAMA WSA (BLM Administered Public Lands)
SCALE
MILES
KILOMETERS
N
BEAUFORT SEA
TRANSALASKA PIPELINE SYSTEM (TAPS) and DALTON HIGHWAY
LANDS CONVEYED TO THE STATE OF ALASKA DURING PLANNING PROCESS IN FEBRUARY, 1987
ROUTE A
ROUTE B
ROUTE C
(GATES)
NATIONAL PETROLEUM RESERVE-ALASKA
ARCTIC NATIONAL WILDLIFE REFUGE
OUTER UTILITY CORRIDOR
INNER UTILITY CORRIDOR
GATES OF THE ARCTIC NATIONAL PARK & PRESERVE
White Hills
BROOKS RANGE
PHILIP SMITH MOUNTAINS
CONTINENTAL DIVIDE
Umiat
Anaktuvuk Pass
Colville
R1W R1E T1N T1N UMIAT
R23E R24E T4S T4S UMIAT
151°W
150°W
149°W
148°W
147°W
146°W
152°W
68°N

Figure 2.3 Proposed Action: Hypothetical Pipeline Routes

Table 2.2
Disturbance to WSA lands Resulting from the Proposed Action

Activity	Units	Pipeline Routes Route A	 Route B	 Route C	Totals
Primary Disturbance from the main pipeline to TAPS and feederlines	Miles	24 (84)*	130 (167)*	20 (20)*	174 (271)*
	Acres	120	650	100	870
Primary Disturbance within the development fields, camps, pump stations, etc (excluding gravel pits)	Acres	0	800	550	1,350
Total Gravel Needs	Cubic Yards	960,000	11,130,000	5,184,000	17,274,000
Gravel Pit(s) Size (Primary Disturbance)	Acres	60	690	320	1,070
Total Secondary Disturbance	Acres	580	5,370	1,940	7,890
Total Area of Surface Disturbance including Secondary Disturbance	Acres	760	7,510	2,910	11,180

* Figures in parentheses represent total length of main pipeline to TAPS; these figures include those portions of the pipeline on WSA (federal) and nonWSA (state and private) CAMA lands.

TAPS would greatly reduce construction and transportation costs for discoveries in this area.

The anticipated pipeline(s) would be entirely within the CAMA WSA although a significant percentage would be within the nonwilderness assessment area. Route C would actually include two sections of pipeline and road located on either side of the existing TAPS. These two sections of pipeline would connect with TAPS at a single junction to reduce costs and future maintenance. For ease of analysis and description these two sections will be considered a single pipeline of approximately 20 miles in length. Two small development fields both within the WSA would be associated with this pipeline. Direct "primary" surface disturbance to WSA lands would be approximately 550 acres from the construction of facilities at the two small oil or gas development projects and approximately 100 acres of surface disturbance from the construction of the main Route C pipeline/road to TAPS. Approximately 322 acres of primary surface disturbance would result from excavation of gravel pits (assumes 10 foot depth). Due to the proximity of the TAPS and the Dalton Highway, no pump stations nor construction camps outside the development fields and the nonwilderness assessment area would be required. Within the nonwilderness area existing pads and disturbed sites would be used. It is also possible that much of the gravel necessary for this project would come from the nonwilderness area, thus mitigating impacts to areas being studied for wilderness designation. Direct "secondary" surface disturbance of approximately

1,940 acres would occur along the main pipeline/road as well as within the development fields. Secondary surface disturbance, primarily the result of dust and gravel spray along roads, is expected to be limited to 100 feet either side of roads and affect approximately 1,940 acres of land.

Total direct primary surface disturbance of WSA lands under Route C development would be approximately 970 acres; total direct secondary surface disturbance would be approximately 1,940 acres (also see Table 2.2).

Summary: Under the proposed action, based on the assumptions and development scenarios described above, the following surface disturbance to WSA lands would be anticipated from oil and gas development:

Acres of direct primary disturbance	3,290 acres
Development fields/pump stations, etc.	1,350 acres
Main pipelines/roads (i.e. routes A,B,C)	870 acres
Gravel Pits	1,070 acres
Acres of direct secondary disturbance	7,890 acres
Total surface disturbance	11,180 acres

WILDLIFE

Management Actions

The Nigu wilderness area would be managed to provide a natural distribution and number of native wildlife species. The remaining CAMA WSA lands would continue to be managed to protect wildlife habitat. Close coordination and cooperation with the Alaska Department of Fish & Game (ADF&G) would continue, especially on management of big game populations. Coordination will also continue with the United States Fish and Wildlife Service (USF&WS) on the banding and monitoring program of the threatened peregrine falcon. The falcon is found along river drainages crossing WSA lands and especially along the Colville River. No additional management actions, other than stipulations to protect habitat as much as possible (see Appendix A), are planned for the CAMA WSA lands.

Anticipated Activities

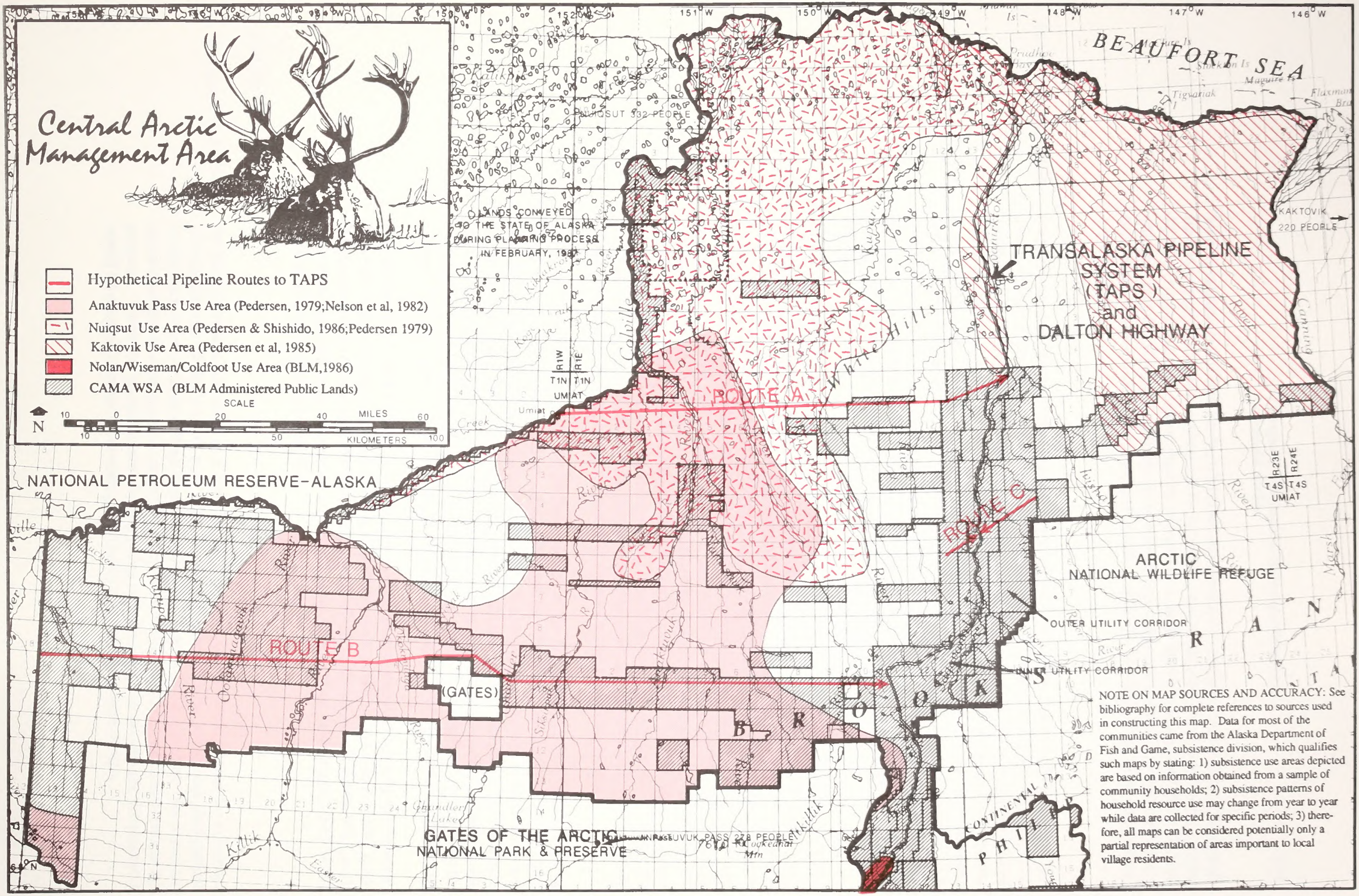
No activities specific to wildlife or wildlife habitat would occur as a result of the Proposed Action. Activities which would occur and could potentially impact wildlife are as described under the preceding and following sections.

RECREATION

Management Actions

Under the Proposed Action, the 41,000 acre Nigu wilderness area would be closed to general motorized recreational use. However, Sections 811 and 1110 of the Alaska National Interest Lands Conservation Act (ANILCA) contain special provisions for allowance of motorized use, subject to reasonable regulations, in wilderness areas in Alaska for traditional and subsistence purposes. Generally speaking, this allows use of aircraft, motorboats and snowmachines (with adequate snow cover).

Outside of the Nigu wilderness area, BLM policy in CAMA restricts use of ORVs to periods of frozen ground and adequate snowcover (except by permit). All recreational ORV use and rifle


Central Arctic Management Area
Hypothetical Pipeline Routes to TAPS
Anaktuvuk Pass Use Area (Pedersen, 1979;Nelson et al, 1982)
Nuiqsut Use Area (Pedersen & Shishido, 1986;Pedersen 1979)
Kaktovik Use Area (Pedersen et al, 1985)
Nolan/Wiseman/Coldfoot Use Area (BLM,1986)
CAMA WSA (BLM Administered Public Lands)
SCALE
MILES
KILOMETERS
N
BEAUFORT SEA
NUIQSUT 332 PEOPLE
KAKTOVIK 220 PEOPLE
LANDS CONVEYED TO THE STATE OF ALASKA DURING PLANNING PROCESS IN FEBRUARY, 1987
TRANSALASKA PIPELINE SYSTEM (TAPS) and DALTON HIGHWAY
ROUTE A
ROUTE B
ROUTE C
(GATES)
NATIONAL PETROLEUM RESERVE-ALASKA
ARCTIC NATIONAL WILDLIFE REFUGE
OUTER UTILITY CORRIDOR
INNER UTILITY CORRIDOR
GATES OF THE ARCTIC NATIONAL PARK & PRESERVE
ANAKTUVUK PASS 228 PEOPLE
BROOKS RANGE
CONTINENTAL DIVIDE
White Hills
Colville
Umiat
UMIAT
151° W
150° W
149° W
148° W
147° W
146° W

NOTE ON MAP SOURCES AND ACCURACY: See bibliography for complete references to sources used in constructing this map. Data for most of the communities came from the Alaska Department of Fish and Game, subsistence division, which qualifies such maps by stating: 1) subsistence use areas depicted are based on information obtained from a sample of community households; 2) subsistence patterns of household resource use may change from year to year while data are collected for specific periods; 3) therefore, all maps can be considered potentially only a partial representation of areas important to local village residents.

Figure 2.4 CAMA Subsistence Use Areas and Hypothetical Pipeline Routes

hunting is prohibited within 5 miles of the Dalton Highway by state law. Use of new oil field roads for hunting and ORV use is expected to be severely curtailed by similar state restrictions. (Note: BLM's recreational regulations require adherence to state laws pertaining to ORVs if more stringent than BLM policy). Outside the nonwilderness assessment area (i.e. lands visible from the Dalton Highway) BLM management would emphasize primitive-traditional recreational opportunities.

Anticipated Activities

Very few recreationists currently use the proposed wilderness area. Most motorized use of the area conforms to the allowable uses as stated by ANILCA. Designation of the Nigu Block as wilderness is not expected to cause any immediate change in visitor use of the area as traditional and subsistence uses of the area will not be precluded (this includes traditional sport hunting). The exact number of users is not known; however, it is estimated that not over 40 recreational visitor use days per year are spent in the Nigu Block. Almost all access to the area is by aircraft. It is estimated that about one-third of those entering the area bring rafts with outboards for use during their stay. Most of these visitor days are spent sport hunting for caribou, grizzly bear and, to a lesser extent, Dall's sheep. Use is not expected to increase beyond 100 visitor use days (VUDs) annually.

On the remaining 3,639,000 acres of nondesignated CAMA WSA lands, approximately 2,000 recreational VUDs occur. Of this, approximately 60% or 1,250 VUDs is authorized use occurring along the Dalton Highway in the area determined nonwilderness in character. Authorized recreational activity in this area is primarily sightseeing (about 1,000 VUDs from tour buses between May and September) and archery hunting with access by aircraft or foot (state law prohibits rifle-hunting and recreational ORV use within 5 miles of the Dalton Highway). Activities which are in whole or in part unauthorized probably account for an additional 300 VUDs annually. This is attributable to rifle sport hunting and/or use of ORVs within 5 miles of the Dalton Highway and individuals traveling the Highway without permit Outside the nonwilderness assessment area and the recommended Nigu Block, approximately 450 VUDs are attributable to sport hunting or fishing and river floating using aircraft for access.

Under the Proposed Action, if the northern portion of the Dalton Highway remains closed to public travel, current use would increase quite slowly. Only tour bus activity may increase appreciably. However, it is anticipated that the road closure will be removed. This will allow and encourage additional growth in recreational use of CAMA especially within the nonwilderness area. Increased use within the nonwilderness assessment area will be primarily sightseeing and car camping along the Dalton Highway. Recreational use of this area would be expected to double to about 2,500 annual VUDs within 5 years of the Dalton Highway being opened to public use.

Recreational use of WSA lands outside the nonwilderness assessment area would also increase. However, if as expected, state restrictions are imposed on use of ORVs and hunting along roads constructed to new oil and gas production fields, growth in recreational use of CAMA WSA lands outside the nonwilderness assessment area will be quite slow perhaps doubling to 1,500 VUDS in 10 to 20 years before leveling off.

SUBSISTENCE

Management Actions

No management action taken as a result of the Proposed Action would restrict the continued subsistence use of the 41,000 acre Nigu block recommended for wilderness designation. Subsistence access and use will not be prohibited under wilderness management. Nor would any specific subsistence management actions be taken on nondesignated WSA lands as a result of this proposal. However, certain potentially impacting activities, such as oil and gas development, would be allowed to occur on nondesignated lands under the Proposed Action.

Anticipated Activities

Subsistence use of the Nigu block is light with access gained primarily by use of snowmachines in winter months. Subsistence use of the area is primarily trapping and hunting by residents of Anaktuvuk Pass (approximately 100 air miles east). This area represents less than 1% of the Anaktuvuk Pass subsistence use area. Increased recreational use of the area due to wilderness designation is expected to be light. No other potentially impacting activity would be expected to occur in the area.

The villages of Anaktuvuk Pass, Nuiqsut, Kaktovik and Nolan/Wiseman have historically used at least some portion of the nondesignated WSA for subsistence purposes. Of the four, the subsistence use area of Anaktuvuk Pass encompasses the most WSA lands but is still less than 7% of their total historical use area. WSA lands encompass 5% or less of the use areas of the other villages. Actions most likely to cause a change in subsistence use patterns will be related to oil and gas development, primarily due to east-west pipelines. Hypothetical pipeline route B crosses about 120 miles of the subsistence use area of Anaktuvuk Pass; about 85 miles of which is also within the WSA. Hypothetical pipeline route A crosses about 40 miles of the subsistence use area of Anaktuvuk Pass and about 50 miles of the subsistence use area of Nuiqsut; in both cases about 2 miles of this pipeline crossing is also within the WSA, see Figure 2.4. More detailed descriptions of these potentially impacting activities are found in the preceding sections.

NO WILDERNESS / NO ACTION ALTERNATIVE

0 Acres Recommended for Wilderness Designation

3,680,000 Acres of Nonwilderness

Under this alternative none of the 3,680,000 acres of land within the CAMA WSA would be designated by Congress as part of the National Wilderness Preservation System (NWPS). General management of the lands would be under the multiple use guidance set forth by the *Draft Utility Corridor RMP* (U.S. Department of the Interior, BLM, 1987) and subsequent plans. The following are brief summaries of actions significant to the issues that would take place under this alternative:

LOCATABLE MINERALS

Management Actions

Under the No Wilderness Alternative, all 3,680,000 acres of the CAMA WSA would be opened to hardrock mineral development. This differs from the Proposed Action in that the 41,000 acre Nigu block would also be available to hardrock mineral development under this alternative.

Anticipated Activities

Development of potentially occurring hardrock minerals (i.e. lead-zinc) within the Nigu block is not expected because of the areas remoteness, the lack of existing infrastructure, lack of a discovery, and the presence elsewhere of potentially occurring minerals. Therefore, under this alternative hardrock mineral development would be limited to one placer gold deposit, the same as under the Proposed Action. Further discussion and a description of the anticipated operation may be found under the "Locatable Minerals" section for the Proposed Alternative. The total disturbed area during the life of this operation as described would be approximately 250 acres.

ENERGY RESOURCES

Management Actions

Under the No Wilderness Alternative 3,406,000 acres of CAMA WSA lands would be open to *federal* oil and gas leasing. Closed to federal leasing would be the 274,000 acres of split estate lands owned by Arctic Slope Regional Corporation (ASRC). These split-estate lands are not likely to be returned to the federal government. However, oil and gas development would be encouraged by ASRC. Hence, under this alternative, 3,680,000 acres of WSA lands would be available for oil and gas leasing and development (federal or ASRC). This differs from the Proposed Action in that the 41,000 acre Nigu block (of low potential) would also be available for oil and gas leasing and development.

Anticipated Activities

No oil and gas leases currently exist on any CAMA WSA lands. Presumably all high potential lands would be leased in the future. Approximately 3,330,000 acres of CAMA WSA lands are considered to have high potential for oil and gas occurrence. Remaining lands are of low potential and leasing is not expected to occur.

Because the Nigu block is of low potential for oil and gas occurrence, expected oil and gas development under this alternative would be the same as under the Proposed Action. Leasing of the 3,330,000 acres of high potential lands would result in several phases of development: geological and geophysical (principally seismic) exploration; exploratory drilling; development drilling; and construction of all-season roads, oil transmission pipelines and production facilities. A general description of expected activities and a detailed oil and gas development scenario appears in the "Energy Resources" section under the Proposed Action.

The anticipated surface disturbance from oil and gas development under this alternative would be the same as for the Proposed Action and is summarized below:

Total acres of primary disturbance	3,290 acres
Development fields/pump stations, etc	1,350 acres
Main pipelines/roads (i.e. routes A,B,C)	870 acres
Gravel Pit	1,070 acres
Total acres of secondary disturbance	7,890 acres
Total surface disturbance	11,180 acres

WILDLIFE

Management Actions

The CAMA WSA lands would continue to be managed to protect wildlife habitat. Close coordination and cooperation with the Alaska Department of Fish & Game (ADF&G) would continue, especially on management of big game populations. Coordination would also continue with the United States Fish and Wildlife Service (USF&WS) on the banding and monitoring program of the threatened peregrine falcon. The falcon is found along river drainages crossing WSA lands and especially along the Colville River. No additional management actions, other than stipulations to protect habitat as much as possible (see Appendix A), would be planned for CAMA WSA lands.

Anticipated Activities

No activities specific to wildlife or wildlife habitat would occur as a result of this alternative.

Activities which would occur and could potentially impact wildlife are as described under the preceding and following sections.

RECREATION

Management Actions

Under this alternative management actions as described under the Proposed Action for nondesignated lands would apply to the entire WSA, including the Nigu block. BLM policy in CAMA restricts use of ORVs to periods of frozen ground and adequate snowcover (except by permit). All recreational ORV use and rifle hunting is prohibited within 5 miles of the Dalton Highway by state law. Use of new oil field roads for hunting and ORV use is expected to be severely curtailed by similar state restrictions. (Note: BLM's recreational regulations require adherence to state laws pertaining to ORVs if more stringent than BLM policy.) Outside the nonwilderness assessment area BLM management would emphasize primitive-traditional recreational opportunities.

Anticipated Activities

Within the 3,680,000 acres of CAMA WSA lands, approximately 2,000 recreational visitor use days (VUDs) occur. Of this, approximately 60% or 1,250 VUDs is authorized use occurring along the Dalton Highway in the area determined nonwilderness in character. Authorized recreational activity in this area is primarily sightseeing (about 1,000 VUDs from tour buses between May and September) and archery hunting with access by aircraft or foot (state law prohibits rifle-hunting and recreational ORV use within 5 miles of the Dalton Highway). Activities which are in whole or in part unauthorized probably account for an additional 300 VUDs annually. This is attributable to rifle sport hunting and/or use of ORVs within 5 miles of the Dalton Highway and individuals traveling the Highway without permit Outside the nonwilderness assessment area and the recommended Nigu Block approximately 450 VUDs are attributable to sport hunting and fishing and river floating using aircraft for access.

Under this alternative, if the northern portion of the Dalton Highway remains closed to public travel, current use would increase quite slowly. Only tour bus activity may increase appreciably. However, it is anticipated that the road closure would be removed. This would allow and encourage additional growth in recreational use of CAMA especially within the nonwilderness area. Increased use within the nonwilderness assessment area would be primarily sightseeing and car camping along the Dalton Highway. Recreational use of this area would be expected to double to about 2,500 annual VUDs within 5 years of the Dalton Highway being opened to public use.

Recreational use of WSA lands outside the nonwilderness assessment area would also increase. However, if as expected, state restrictions are imposed on use of ORVs and hunting along these roads, growth in recreational use of CAMA WSA lands outside the nonwilderness assessment area would be quite slow perhaps doubling to 1,500 VUDS in 10 to 20 years before leveling off.

SUBSISTENCE

Management Actions

No specific subsistence management actions would be taken on WSA lands as a result of this proposal. However, certain potentially impacting activities, such as oil and gas development, would be allowed to occur on WSA lands under this alternative

Anticipated Activities

The villages of Anaktuvuk Pass, Nuiqsut, Kaktovik and Nolan/Wiseman have historically used at least some portion of the WSA for subsistence purposes. Of the four, the subsistence use area of Anaktuvuk Pass encompasses the most WSA lands but is still less than 7% of their total historical use area. WSA lands encompass 5% or less of the use areas of the other villages.

Actions most likely to cause a change in subsistence use patterns under this alternative would be the same as under the Proposed Action and would be related to oil and gas development, primarily due to east-west pipelines. Hypothetical pipeline route B crosses about 120 miles of the subsistence use area of Anaktuvuk Pass; about 85 miles of which is also within the WSA. Hypothetical pipeline route A crosses about 40 miles of the subsistence use area of Anaktuvuk Pass and about 50 miles of the subsistence use area of Nuiqsut; in both cases about 2 miles of this pipeline crossing is also within the WSA (see Map 2-3). More detailed descriptions of these potentially impacting activities are found in the preceding sections.

ALL WILDERNESS ALTERNATIVE

3,364,000 Acres Recommended for Wilderness Designation

316,000 Acres of Nonwilderness

Under this alternative all potential wilderness WSA lands would be designated by Congress as part of the National Wilderness Preservation System (NWPS). Only the lands within the nonwilderness assessment area, approximately 316,000 acres, would not be designated as wilderness. The nonwilderness assessment area roughly corresponds to the lands that are visible from the Dalton Highway. Discretionary management actions would be focused on preservation of wilderness values. The following are brief summaries of actions significant to issues that would take place under this alternative

LOCATABLE MINERALS

Management Actions Subject to valid existing rights, 3,090,000 acres of CAMA WSA lands would be closed to locatable mineral development as a result of wilderness management. Open for development would be approximately 590,000 acres of WSA lands. This would include the 274,000 acres of split-estate lands (the subsurface is owned by ASRC) and the 316,000 acre nonwilderness assessment area. The nonwilderness assessment area, which is almost totally within the "inner Utility Corridor" is now closed to mineral entry. However, it is expected that as energy resources on the north slope are depleted and the need to protect future pipeline rights-of-way no longer exists, the "inner Corridor" (and thus the nonwilderness assessment area) would be opened for mineral development.

Anticipated Activities There are currently 13 properly located and maintained (placer) claims within the CAMA WSA. Validity examinations will be conducted on these claims. It is expected that none of the 13 claims will prove valid. (Note: It appears that as a result of the present closure of the northern portion of the Dalton Highway to public use, most of these claims were filed in order to gain access to the area for purposes other than mining, most likely hunting).

Of the 590,000 acres of WSA which would be available to future location and development, only about 65,000 acres, most of which is in the nonwilderness assessment area, is of moderate potential for locatable minerals. The remaining 530,000 acres of available lands are of low potential. Given the relatively small amount of available land, current resource evaluations, the lack of infrastructure, and availability elsewhere of potentially occurring mineral deposits, no hardrock mineral development within the CAMA WSA would occur under this alternative.

ENERGY RESOURCES

Management Actions

Under this alternative, 3,090,000 acres of CAMA WSA lands would be closed to oil and gas development and construction of pipelines/roads. Available for development would be approximately 590,000 acres of land which would include the 274,000 acres of split-estate lands (the subsurface is owned by ASRC) and the 316,000 acre nonwilderness assessment area.

Anticipated Activities

Under the all wilderness alternative, development of most WSA lands would be precluded since no oil and gas leases currently exist on WSA lands and wilderness management would not allow future leasing on most WSA lands. Leasing within the WSA would be limited to the 520,000 acres of high potential lands within the nonwilderness assessment and ASRC split-estate areas. No pipeline crossings of CAMA from NPR-A could occur under this alternative to facilitate development of available WSA lands as wilderness designation would effectively "seal off" the eastern side of NPR-A. (Note: ANILCA Title XI provisions to allow access across conservation units created by said Act would not apply to CAMA wilderness; ANILCA did not create a conservation unit in CAMA only a study area). The all wilderness alternative would also seal off much of the federal portion of the TAPS and Dalton Highway from new east-west pipelines and roads. Without development in NPR-A to facilitate development of available WSA lands and adjacent state and private CAMA lands, the probability of any development and production occurring in CAMA is quite low. On WSA lands, anticipated activity is expected to be limited to seismic survey activity and perhaps one exploratory well on the split-estate lands and one or two exploratory wells in the nonwilderness assessment area.

The only development that might occur which would affect WSA lands would be a result of discoveries on state lands west of Toolik Lake where the nonwilderness assessment area extends to the edge of the WSA and provides access to TAPS. In this area, see Figure 2.5, smaller discoveries could be close enough to TAPS to make economic recovery possible. Although such discoveries would not be within the WSA, construction of an east-west pipeline to TAPS would cross approximately 4 miles of WSA lands within the nonwilderness assessment area. This would result in approximately 20 acres of primary disturbance and 100 acres of secondary disturbance. Construction camps, staging areas etc., would be located within the nonwilderness assessment area on existing pads and previously disturbed areas. No disturbance would occur on WSA lands outside of the nonwilderness assessment area.

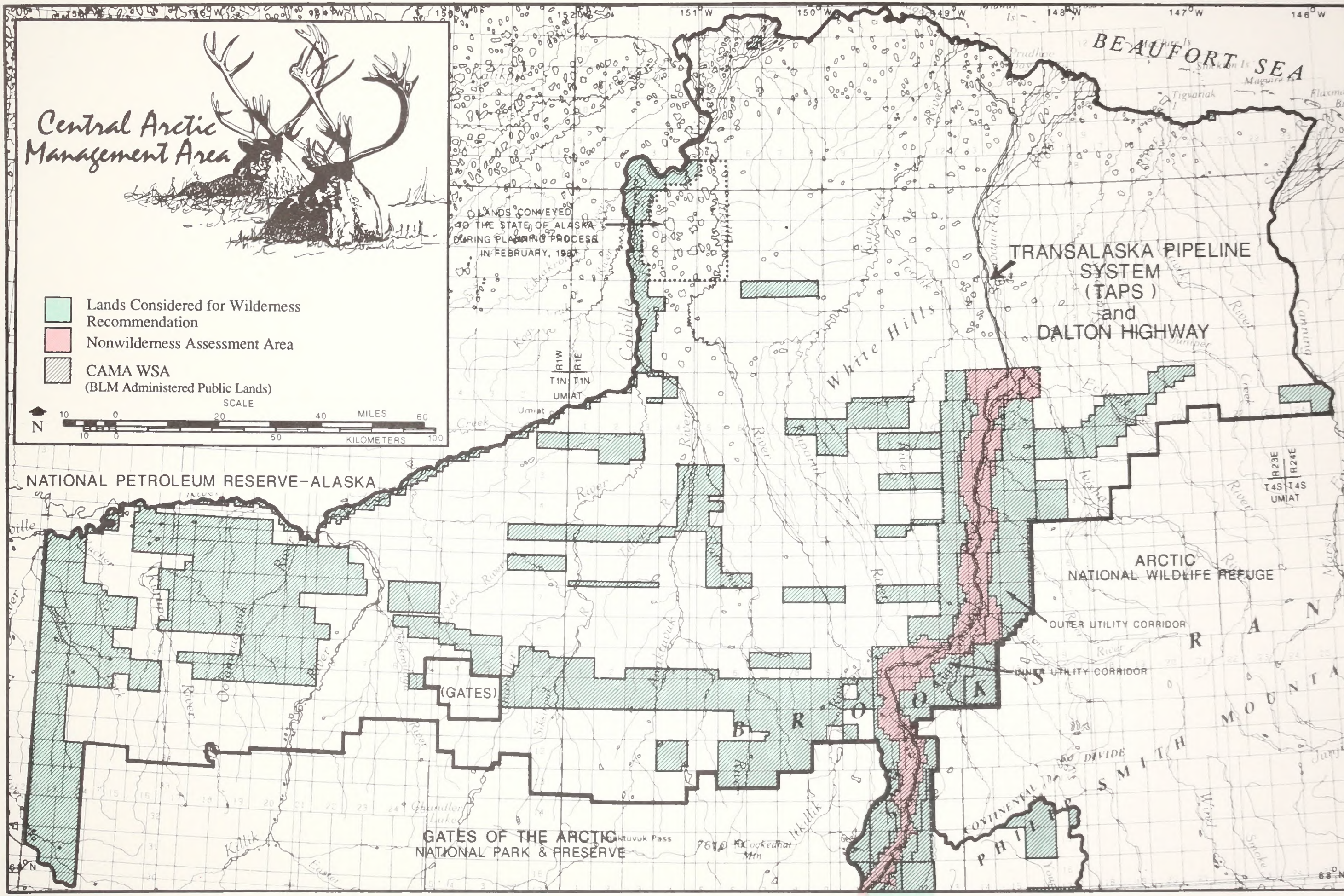
WILDLIFE

Management Actions

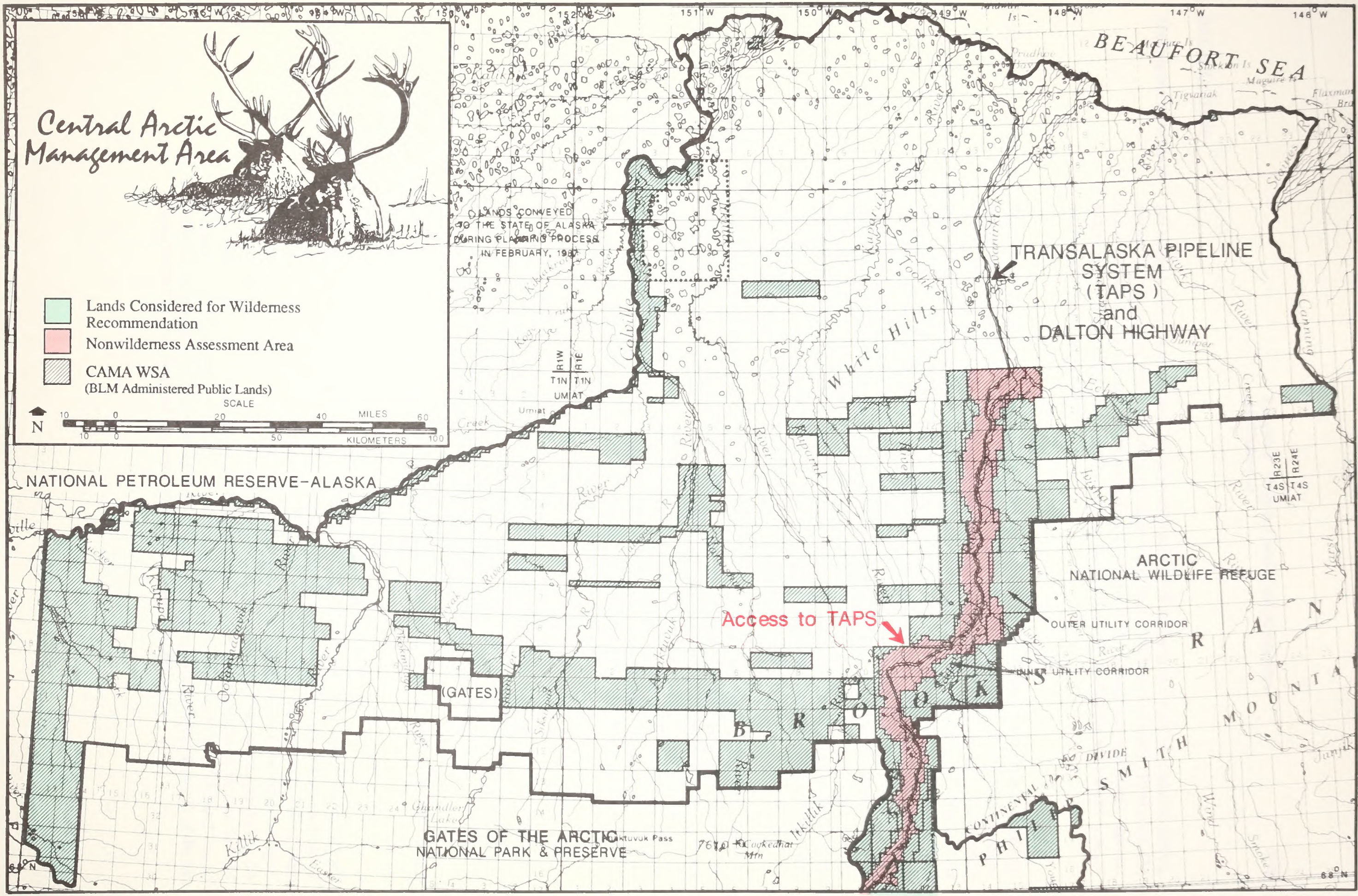
The CAMA WSA lands would be managed to provide a natural distribution and number of native wildlife species. Close coordination and cooperation with the Alaska Department of Fish & Game (ADF&G) would continue, especially on management of big game populations. Coordination would also continue with the United States Fish and Wildlife Service (USF&WS) on the banding and monitoring program of the threatened peregrine falcon. The falcon is found along river drainages crossing WSA lands and especially along the Colville River. No additional management actions, other than stipulations to protect habitat as much as possible (see Appendix A), are planned for the CAMA WSA lands.

Anticipated Activities

No activities specific to wildlife or wildlife habitat would occur as a result of this alternative. Activities which would occur and could potentially impact wildlife are as described under the preceding and following sections.


Central Arctic Management Area
Lands Considered for Wilderness Recommendation
Nonwilderness Assessment Area
CAMA WSA (BLM Administered Public Lands)
SCALE
MILES
KILOMETERS
N
BEAUFORT SEA
LANDS CONVEYED TO THE STATE OF ALASKA DURING PLANNING PROCESS IN FEBRUARY, 1987
TRANSALASKA PIPELINE SYSTEM (TAPS) and DALTON HIGHWAY
White Hills
NATIONAL PETROLEUM RESERVE-ALASKA
ARCTIC NATIONAL WILDLIFE REFUGE
OUTER UTILITY CORRIDOR
INNER UTILITY CORRIDOR
BROOKS RANGE
PHILIP SMITH MOUNTAINS
CONTINENTAL DIVIDE
(GATES)
GATES OF THE ARCTIC NATIONAL PARK & PRESERVE
Anaktuvuk Pass
Cockedhat Mtn
Colville
Umiat
T1N R1W R1E UMIAT
T4S R23E R24E UMIAT
151° W
150° W
149° W
148° W
147° W
146° W
152° W
68° N

Map 2-2 All Wilderness Alternative


Central Arctic Management Area
🟩 Lands Considered for Wilderness Recommendation
🟥 Nonwilderness Assessment Area
▨ CAMA WSA (BLM Administered Public Lands)
SCALE
MILES
KILOMETERS
N
BEAUFORT SEA
LANDS CONVEYED TO THE STATE OF ALASKA DURING PLANNING PROCESS IN FEBRUARY, 1987
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White Hills
NATIONAL PETROLEUM RESERVE-ALASKA
Access to TAPS
ARCTIC NATIONAL WILDLIFE REFUGE
OUTER UTILITY CORRIDOR
INNER UTILITY CORRIDOR
(GATES)
BROOKS RANGE
PHILIP SMITH MOUNTAINS
CONTINENTAL DIVIDE
GATES OF THE ARCTIC NATIONAL PARK & PRESERVE
Anaktuvuk Pass
Colville
Umiat
151° W
150° W
149° W
148° W
147° W
146° W
68° N

Figure 2.5 All Wilderness Alternative Access to TAPS

RECREATION

Management Actions

All CAMA WSA lands outside the nonwilderness assessment area would be closed to ORVs, except for subsistence and traditional uses as provided for by Sections 811 and 1110 of ANILCA (i.e. snow machines, aircraft and motorboats for traditional and subsistence activities). Recreational management objectives would focus on preservation of wilderness values and nonmotorized recreation opportunities.

Anticipated Activities

Wilderness designation is not expected to cause any immediate change in the amount or pattern of recreational use that is now occurring in the WSA for several reasons: 1) The area is remote and lightly used (see "Anticipated Activities" under the no wilderness alternative). 2) BLM policy in the past has restricted recreational use of ORVs to machines weighing less than 600 pounds gross vehicle weight during periods of adequate snow cover and frozen ground. 3) The northern portion of the Dalton Highway is closed to public use making access to the area difficult or, in the case of access by aircraft, expensive; 4) Use of ORVs for recreational purposes 5 miles either side of the Dalton Highway (this includes most of the nonwilderness assessment area) is prohibited by State law and there is no designated overland access from the Dalton Highway to WSA lands outside the closed area; thus a "legal barrier" even to recreational snowmachine use exists since ORVs cannot legally cross the 5 mile closed area to reach more remote areas. These factors have discouraged most recreational ORV and other recreational use of the area.

Under this alternative, as under the other alternatives if the northern portion of the Dalton Highway remains closed to public use, only tour bus activity may increase appreciably. If, as expected, the road closure is removed substantial growth in visitor use would occur along the Highway within the nonwilderness assessment area. Increased use in this area would be sightseeing and car camping. Increases in recreational use of designated lands would be slow perhaps doubling to 1,500 visitor use days in 15 to 20 years before leveling off. Within the nonwilderness assessment area use may double (with the road open) to about 2,500 visitor use days in 5 years.

SUBSISTENCE

Management Actions

No management action taken as a result of this alternative would restrict the continued subsistence use of the 3,364,000 acres of land recommended for wilderness designation. Subsistence access and use would not be prohibited under wilderness management. Potentially conflicting activities would be precluded on most WSA lands as a result of wilderness management.

No specific subsistence management actions would be taken on nondesignated WSA lands as a result of this proposal.

Anticipated Activities

The villages of Anaktuvuk Pass, Nuiqsut, Kaktovik and Nolan/Wiseman have historically used at least some portion of the WSA for subsistence purposes. Of the four, the subsistence use of area of Anaktuvuk Pass encompasses the most WSA lands but is still less than 7% of their historical use area. WSA lands encompass 5% or less of the use areas of the other villages. Conflicting development that could occur would affect only the extreme eastern portion of the subsistence use area of Anaktuvuk Pass and extreme southeastern portion of the use area of Nuiqsut. Development within these use areas, if any, would not occur on WSA land but on adjacent state or private land within CAMA. Development would affect less than 5% of the the Anaktuvuk Pass use area and less than 1% of the Nuiqsut use area.

PARTIAL WILDERNESS ALTERNATIVE

486,000 Acres Recommended for Wilderness Designation

3,194,000 Acres of Nonwilderness

Under this alternative, 486,000 acres of CAMA WSA lands would be designated wilderness. The area includes four blocks of land referred to as the: Glacier block (50,500 acres); Nigu River extension block (157,000 acres); Oolamnagivik block (233,000 acres); and Your Creek block (45,500 acres). These blocks of land would be managed to preserve their wilderness values. Those lands recommended as nonsuitable would be made available for other multiple-use management and development as specified in the *Draft Utility Corridor Resource Management Plan* (U.S Department of the Interior, BLM, 1987) and subsequent plans. Following are brief summaries of the actions significant to the issues that would take place under this alternative.

LOCATABLE MINERALS

Management Actions

The 486,000 acres designated as wilderness would be closed to mineral entry and location. Of the remaining 3,194,000 acres of land within the WSA, 274,000 acres of subsurface estate is owned by Arctic Slope Regional Corporation (ASRC). It is not anticipated that this subsurface will be returned to the federal government. Consequently, these lands would not be open to entry and location under the U.S mining laws. However, these lands would be available for mineral development under ASRC ownership. Also, the 540,000 acres of land within the "inner Utility Corridor", presently closed to hardrock mineral development, is expected to be opened to development as energy resources on the north slope are depleted and the need for protecting future pipeline routes through the area disappears. Hence, in all 3,194,000 acres of CAMA WSA lands outside the proposed wilderness area would be open to hardrock mineral development.

Anticipated Activities

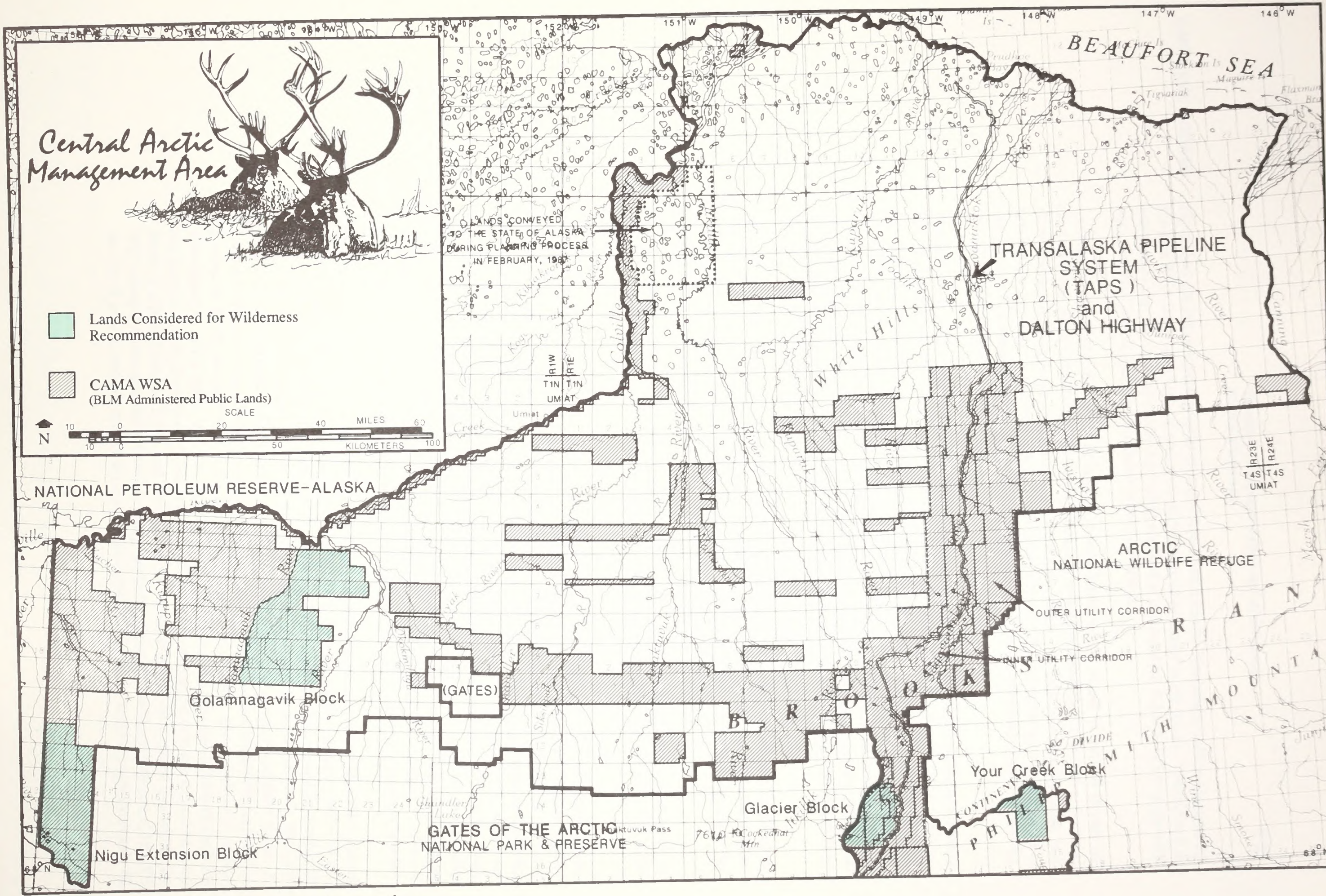
Currently, no mining claims exist on any lands recommended as wilderness under this alternative. On nondesignated lands there were 19 properly located and maintained mining claims in January of 1987. These claims were all within the Utility Corridor. By May of 1988, there were 13 claims remaining. The majority and perhaps all of these remaining claims are expected to be closed in the near future as no discovery of minerals is known to have occurred.

Within the WSA, the lands with moderate potential for hardrock mineral occurrence within the Brooks Range in and near the Utility Corridor south of Toolik Lake (approximately 275,000 acres) have the greatest (but still low) potential for development. Under this alternative approximately 96,000 acres or a little over one-third of this area is closed to hardrock mineral development. With such a large portion of the Brooks Range-Corridor area closed, the probability of discovering an economically recoverable deposit decreases greatly. Consequently, no hardrock mineral development is anticipated under this alternative.

ENERGY RESOURCES

Management Actions

Approximately 2,920,000 acres of CAMA WSA lands would be opened to *federal* oil and gas leasing. Closed to federal leasing would be the 486,000 acres of proposed wilderness and the 274,000 acres of split estate lands owned by Arctic Slope Regional Corporation (ASRC). These split-estate lands are not likely to be returned to the federal government. However, oil and gas development would likely be encouraged by ASRC. Hence, 3,194,000 acres of WSA lands would be made available to oil and gas development.



Map 2-3 Partial Wilderness Alternative

Anticipated Activities

No oil and gas leases currently exist on any CAMA WSA lands. Presumably, all nondesignated CAMA WSA lands with high oil and gas potential would be leased in the future. Therefore, it is anticipated that the approximately 3,067,000 acres of nondesignated CAMA WSA lands with high potential for oil and gas occurrence would be leased.

Leasing on the 3,067,000 acres of high potential lands would result in several phases of development: geological and geophysical (principally seismic) exploration; exploratory drilling; development drilling; and construction of all-season roads, oil transmission pipelines and production facilities. A more complete description of typical development activities appears in the "Energy Resources" section under the Proposed Action. A summary of expected activities for this alternative follows.

Based on past activity, an average of about 500 miles of seismic survey line would be run annually and approximately 25 exploratory wells would be drilled over the next 30 years. Actual development would occur in conjunction with three different pipeline routes. Routes A and C and associated development are the same as under the no wilderness alternative and the Proposed Action. Route B and associated development would be essentially the same as under the no wilderness alternative and the Proposed Action, however, the main pipeline between NPR-A and TAPS would be rerouted to avoid the Oolamnagavik wilderness area see Figure 2.6. These three routes and expected development are:

Route A (and associated development): Under this alternative Route A and associated development would be the same as described for the no wilderness alternative and the Proposed Action. It represents a pipeline for transportation of oil produced in the National Petroleum Reserve-Alaska (NPR-A) and would connect to TAPS at or near pump station 2.

In total, direct primary surface disturbance of WSA lands under Route A development would be approximately 180 acres; total direct secondary disturbance would be approximately 580 acres (also see Table 2.3).

Route B (and associated development): Route B reflects the probable need for oil transportation from potential discoveries in the southern half of the imbricate fold and thrust belt plays within CAMA as well as from NPR-A. Development under this alternative is expected to be the same as under the no wilderness alternative and the Proposed Action. However, in order to avoid the Oolamnagavik wilderness area, the Route B main pipeline from NPR-A to TAPS would be rerouted. The anticipated pipeline would cross approximately 110 miles of CAMA WSA lands and about 60 miles of state and private (ASRC) land. Total length of the pipeline would only increase a few miles (straight line distance). However, the new alignment would force more of the pipeline onto nonfederal land. This would result in an additional approximately 17 miles of private land being used as compared to the no wilderness alternative.and the Proposed Action.

Oil field development associated with this pipeline is anticipated to occur within the WSA and on adjacent lands. The main field(s) would be within NPR-A or within the western portion of the WSA. It would be assumed for purposes of this document that a large field would be developed within the extreme western portion of the WSA. Smaller discoveries, developable once the infrastructure is in place, would be located on state or private land along the pipeline route. A portion of the pipelines and access roads needed to transfer oil from these smaller fields to the main pipeline to TAPS would also cross the WSA (approximately 6 miles). Direct "primary" surface disturbance to WSA lands would be approximately 680 acres from the construction of facilities at a large oil development project and approximately 580 acres from the construction of the main Route B pipeline/road to TAPS and "feeder" lines. In addition, it is anticipated that within the WSA along the main pipeline at least one pump station requiring approximately 40 acres (350,000 cu. yds of gravel) and one temporary construction camp and airstrip requiring approximately 80 acres (540,000 cu.yds of gravel) would be required. Approximately 655 acres of surface disturbance would result from excavation of gravel pits (assuming a 10 foot depth). Direct "secondary" surface disturbance, primarily the result of dust and gravel spray along roads, would be limited to 100 feet either side of roads and would affect approximately 5,020 acres of land.

In total direct primary surface disturbance of WSA lands under Route B development would be approximately 2,030 acres; total direct secondary surface disturbance would be approximately 5,020 acres (also see Table 2.3).

Route C (and associated development): Under this alternative, Route C and associated development would be the same as described for the no wilderness alternative and the Proposed Action. It reflects the potential need for the transportation of fluid minerals to the Trans-Alaska Pipeline from within the Utility Corridor. Proximity to TAPS would greatly reduce construction and transportation costs for discoveries in this area.

In total, direct primary surface disturbance of WSA lands under Route C development would be approximately 970 acres; total direct secondary surface disturbance would be approximately 1,940 acres (also see Table 2.3).

Table 2.3
Disturbance to WSA lands Resulting from the Partial Wilderness Alternative

		Pipeline Routes			
Activity	**Units**	**Route A**	**Route B**	**Route C**	**Totals**
Primary Disturbance from the main pipeline to TAPS and feederlines	Miles	24 (84)*	116 (170)*	20 (20)*	160 (274)*
	Acres	120	580	100	800
Primary Disturbance within the development fields, camps, pump stations, etc (excluding gravel pits)	Acres	0	800	550	1,350
Total Gravel Needs	Cubic Yards	960,000	10,570,000	5,184,000	16,714,000
Gravel Pit(s) Size (Primary Disturbance)	Acres	60	655	320	1,035
Total Secondary Disturbance	Acres	580	5,020	1,940	7,54
Total Area of Surface Disturbance including Secondary Disturbance	Acres	760	7,055	2,910	10,725

* Figures in parentheses represent total length of main pipeline to TAPS; these figures include those portions of the pipeline on WSA (federal) and nonWSA (state and private) CAMA lands.

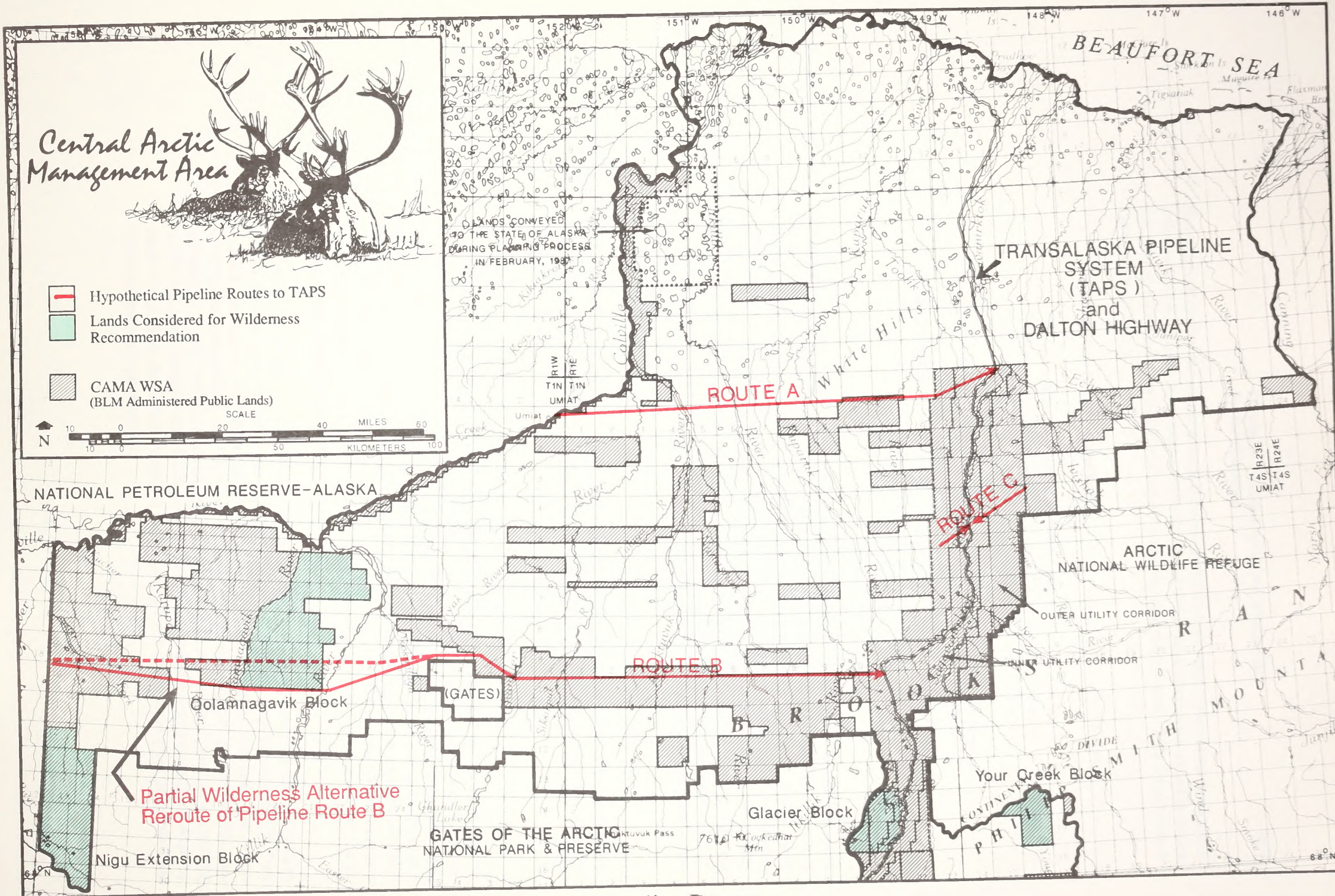

Central Arctic Management Area
Hypothetical Pipeline Routes to TAPS
Lands Considered for Wilderness Recommendation
CAMA WSA (BLM Administered Public Lands)
SCALE
MILES
KILOMETERS
N
BEAUFORT SEA
TRANSALASKA PIPELINE SYSTEM (TAPS) and DALTON HIGHWAY
LANDS CONVEYED TO THE STATE OF ALASKA DURING PLANNING PROCESS IN FEBRUARY, 1987
ROUTE A
ROUTE B
ROUTE C
White Hills
NATIONAL PETROLEUM RESERVE-ALASKA
ARCTIC NATIONAL WILDLIFE REFUGE
OUTER UTILITY CORRIDOR
INNER UTILITY CORRIDOR
(GATES)
Oolamnagavik Block
Partial Wilderness Alternative Reroute of Pipeline Route B
Nigu Extension Block
GATES OF THE ARCTIC NATIONAL PARK & PRESERVE
Anaktuvuk Pass
Glacier Block
Your Creek Block
BROOKS RANGE
PHILIP SMITH MOUNTAINS
CONTINENTAL DIVIDE
Umiat
151° W
150° W
149° W
148° W
147° W
146° W
68° N

Figure 2.6 Partial Wilderness Alternative: Hypothetical Pipeline Routes

Summary: Based on the assumptions and development scenarios described above, surface disturbance from oil and gas development under the Partial Wilderness Alternative would be almost the same as under the no wilderness alternative and the Proposed Action. This disturbance is summarized below:

Total acres of primary disturbance	3,185 acres
Development fields/pump stations, etc	1,350 acres
Main pipelines/roads (i.e. routes A,B,C)	.800 acres
Gravel Pits	1,035 acres
Total acres of secondary disturbance	7,540 acres
Total surface disturbance	10,725 acres

WILDLIFE

Management Actions

The wilderness areas would be managed to provide a natural distribution and number of native wildlife species. The remaining CAMA WSA lands would continue to be managed to protect wildlife habitat. Close coordination and cooperation with the Alaska Department of Fish & Game (ADF&G) would continue, especially on management of big game populations. Coordination would also continue with the United States Fish and Wildlife Service (USF&WS) on the banding and monitoring program of the threatened peregrine falcon. The falcon is found along river drainages crossing WSA lands and especially along the Colville River. No additional management actions, other than stipulations to protect habitat as much as possible (see Appendix A), are planned for the CAMA WSA lands.

Anticipated Activities

No activities specific to wildlife or wildlife habitat would occur as a result of this alternative. Activities which would occur and could potentially impact wildlife are as described under the preceding and following sections.

RECREATION

Management Actions

Under the partial wilderness alternative, 486,000 acres of land would be closed to general motorized recreational use. However, Sections 811 and 1110 of the Alaska National Interest Lands Conservation Act (ANILCA) contain special provisions for allowance of motorized use, subject to reasonable regulations, in wilderness areas in Alaska for traditional and subsistence purposes. Generally speaking, this allows use of aircraft, motorboats and snowmachines (with adequate snow cover). Designation of these areas as wilderness is not expected to cause any immediate change in visitor use as traditional and subsistence uses of the area would not be precluded (this includes traditional sport hunting).

Outside of the designated wilderness areas, BLM policy in CAMA restricts use of ORVs to periods of frozen ground and adequate snowcover (except by permit). All recreational ORV use and rifle hunting is prohibited within 5 miles of the Dalton Highway by state law. Use of new oil field roads for hunting and ORV use is expected to be severely curtailed by similar state restrictions. (Note: BLM's recreational regulations require adherence to state laws pertaining to ORVs if more stringent than BLM policy). Outside the nonwilderness assessment area (i.e. lands visible from the Dalton Highway) BLM management would emphasize primitive-traditional recreational opportunities.

Anticipated Activities

Few recreationists currently use the proposed wilderness areas. The actual number of users is not known, however, it is estimated that about 100 recreational visitor use days (VUDs) are spent in the Glacier block, about 80 VUDs in the Nigu extension block, about 60 VUDs in the Your Creek block and about 30 VUDs in the Oolamnagavik block. Almost all access to these areas is by aircraft with little or no *recreational* ORV use occurring. It is estimated that about one-third of those entering the Nigu extension block bring small motorboats (i.e. rafts with outboards) for use during their stay. Given its proximity to the Dalton Highway there may also be some unauthorized snowmachine use occurring within the Glacier block. Most use of these wilderness areas is sport hunting for caribou, grizzly bear and Dall's sheep.

With other better known and perhaps more appealing wilderness areas nearby in Gates of the Arctic National Park and the Arctic National Wildlife Refuge, recreational use of CAMA wilderness would not be expected to increase immediately as a result of designation. The exception to this may be the Glacier block which could see a sharp rise in recreational use (backpacking) due to its proximity to the Dalton Highway and it's location adjacent to Gates of the Arctic National Park. Here use could double within a few years after the Dalton Highway is opened to public use. In the other designated wilderness areas use would perhaps double in 10 years.

On the nondesignated lands, if the northern portion of the Dalton Highway remains closed to public travel, current use would increase quite slowly. Only tour bus activity may increase appreciably. However, it is anticipated that the road closure would be removed. This would allow and encourage additional growth in recreational use of CAMA. Increased use within the nonwilderness assessment area would be greatest, perhaps doubling within 5 years to about 2,500 annual visitor use days,.primarily due to sightseeing and car camping along the Dalton Highway. On nondesignated WSA lands outside of the nonwilderness assessment area, growth in recreational use is expected to remain quite slow as a result of expected state restrictions on use of new roads (similar to those along the Dalton Highway) prohibiting all recreational ORV use and rifle-hunting. Growth in recreational use of these areas would perhaps double in 10 to 15 years before leveling off.

SUBSISTENCE

Management Actions

No management action taken as a result of this alternative would restrict the continued subsistence use of the 486,000 acres of WSA recommended for wilderness designation. Subsistence access and use would not be prohibited under wilderness management. Nor would any specific subsistence management actions be taken on nondesignated WSA lands as a result of this proposal. However, certain potentially impacting activities, such as oil and gas development, would be allowed to occur on nondesignated lands under this alternative.

Anticipated Activities

Subsistence use of the designated wilderness areas would be primarily trapping and hunting by residents of Anaktuvuk Pass. Their use area includes the Oolamnagavik block, a portion of the Nigu extension block, and a small portion of the Glacier block. These areas represent less than 5% of the Anaktuvuk Pass subsistence use area. Subsistence use of these areas is light with access gained primarily by use of snowmachines in winter. Such access and use would not be prohibited under wilderness management. The extreme southern portion of the Glacier block may also be used by residents of Nolan/Wiseman, if so the area would represent much less than 1% of the Nolan/Wiseman use area. Increased recreational use of the wilderness/subsistence areas is expected to be light.

Portions of the nondesignated WSA lands have historically been used for subsistence purposes by residents of Anaktuvuk Pass, Nuiqsut, Kaktovik and Nolan/Wiseman. Of the four, the subsistence use area of Anaktuvuk Pass encompasses the most nondesignated WSA lands but this is still less than 7% of their historical use area. Nondesignated WSA lands encompass 5% or less of the use areas of the other villages. Activities most likely to cause a change in subsistence use patterns would be related to oil and gas development, primarily due to east-west pipelines. Hypothetical pipeline route B would cross about 120 miles of the subsistence use area of Anaktuvuk Pass; about 60 miles of which would also be within the WSA. Hypothetical pipeline route A would cross about 40 miles of the subsistence use area of Anaktuvuk Pass and about 50 miles of the subsistence use area of Nuiqsut; in both cases about 2 miles of this pipeline crossing would also be within the WSA. More detailed descriptions of these potentially impacting activities are found in the preceding sections.

OOLAMNAGAVIK-ETIVLUK WILDERNESS ALTERNATIVE

867,000 Acres Recommended for Wilderness Designation

2,813,000 Acres of Nonwilderness

This alternative has been developed as a result of public comment on the Draft CAMA Wilderness EIS. Under this alternative, 867,000 acres of CAMA WSA lands would be designated wilderness. The designated wilderness area includes the entire Oolamnagavik block (567,000 acres) and lands adjacent to NPR-A along the East Fork Etivluk River (300,000 acres). These blocks of land would be managed to preserve their wilderness values. Those lands recommended as nonsuitable would be made available for other multiple-use management and development as specified in the *Draft Utility Corridor Resource Management Plan* (U.S Department of the Interior, BLM, 1987) and subsequent plans. Following are brief summaries of the actions significant to the issues that would take place under this alternative.

LOCATABLE MINERALS

Management Actions

Subject to valid existing rights, the 867,000 acres of designated wilderness would be closed to mineral entry and location.

Of the remaining 2,813,000 acres of land within the CAMA WSA, 274,000 acres of subsurface estate is owned by Arctic Slope Regional Corporation (ASRC). It is not anticipated that this subsurface will be returned to the federal government. Consequently, these lands will not be open to entry and location under the U.S mining laws. However, these lands will be available for mineral development under ASRC ownership. Also, the 540,000 acres of land within the "inner Utility Corridor", presently closed to hardrock mineral development, is expected to be opened to development as energy resources on the north slope are depleted and the need for protecting future pipeline routes through the area disappears. Hence, in the future all 2,813,000 acres of CAMA WSA lands outside the proposed wilderness areas would be open to hardrock mineral development.

Anticipated Activities

Anticipated activities under this alternative would be the same as under the no wilderness alternative and the Proposed Action.

Currently, no mining claims exist within the proposed wilderness area, therefore no mining activity could occur in the 867,000 acres of designated wilderness. On nondesignated WSA lands mineral development of potentially occurring hardrock minerals (i.e. lead-zinc) is unlikely due to the area's remoteness, lack of access and infrastructure, and availability of substantial lead-zinc deposits elsewhere (e.g. at Red Dog and Lik properties in western Alaska where access is better). The potential for discovery of a developable gold deposit is low.

In January of 1987 there were 19 properly located and maintained mining claims within the WSA (all outside the designated wilderness area). By May of 1988, there were 13 claims remaining. The majority and perhaps all of these remaining claims are expected to be closed in the near future as no discovery of minerals is known to have occurred. However, given the access provided by the Dalton Highway a developable gold deposit could be discovered in the approximately 275,000 acres of moderate potential land in the Brooks Range in and near the Utility Corridor south of Toolik Lake.

Since the likelihood of finding an economic gold deposit is low, development would likely be limited to one placer gold operation. Assuming a three to four man operation, this would result in 5 acres of *annual* surface disturbance within a 20 acre claim. This disturbance would be a result of the construction of buildings, stripping, processing, and tailings disposal typical of a placer operation. As a claim is mined out it would be expected that new claims would be worked on the discovery stream. Eventually 12 claims would be assumed to be worked along a three mile long section of stream. This would result in a total area of "primary disturbance" (reclaimed) of 180 acres, incidental disturbance of an additional 60 acres and new road disturbance of approximately 6 acres (road extensions to new claims would go over previously disturbed areas). Total disturbed area during the life of the operation would be approximately 250 acres. A more detailed description of the anticipated placer operation can be found in the "Locatable Minerals" section under the Proposed Action.

ENERGY RESOURCES

Management Actions

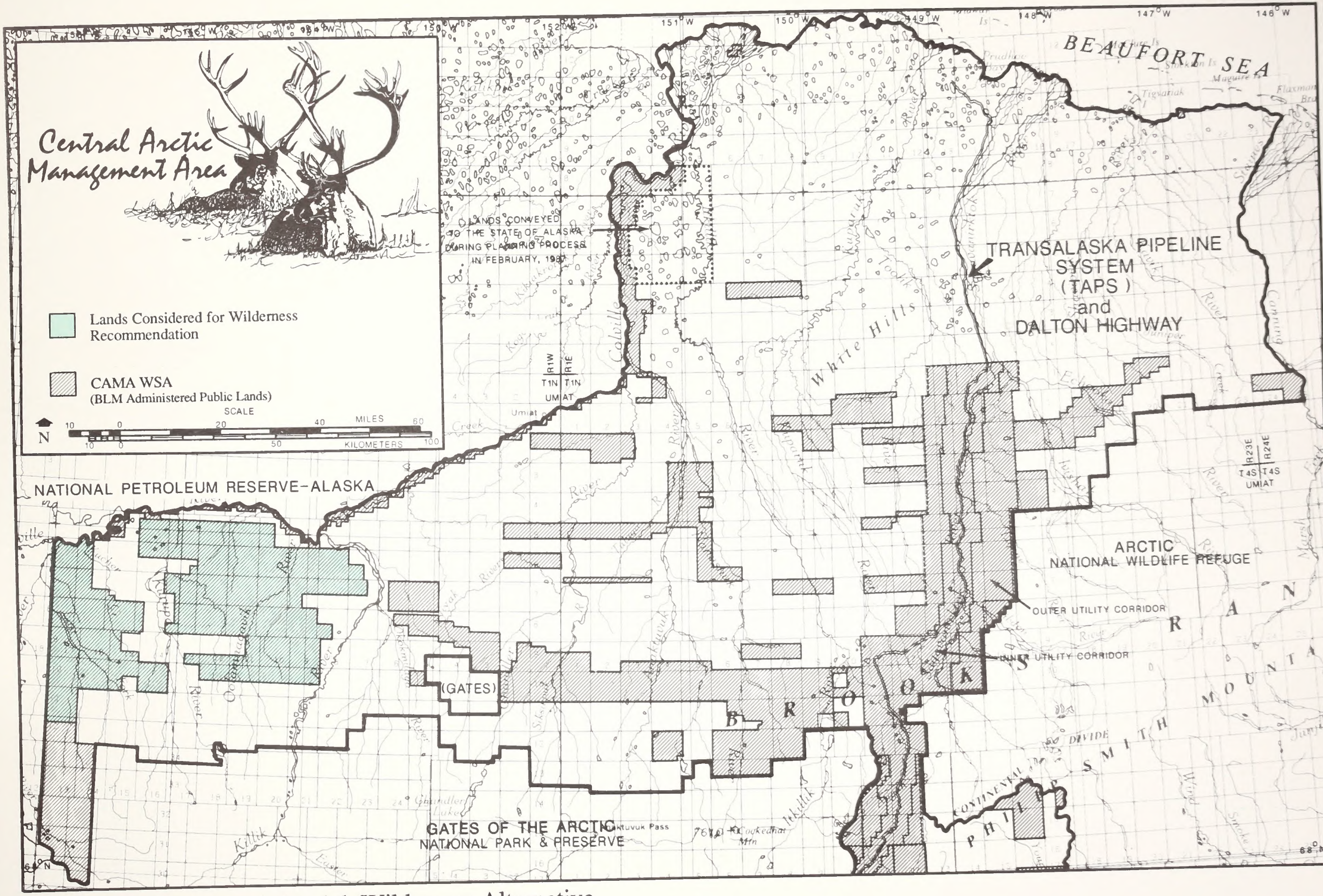
Approximately 2,539,000 acres of CAMA WSA lands would be opened to *federal* oil and gas leasing. Closed to federal leasing would be the 867,000 acres of proposed wilderness and the 274,000 acres of split estate lands owned by Arctic Slope Regional Corporation (ASRC). These split-estate lands are not likely to be returned to the federal government. However, oil and gas development would likely be encouraged by ASRC. Hence, 2,813,000 acres of WSA lands would be made available to oil and gas development.

Anticipated Activities

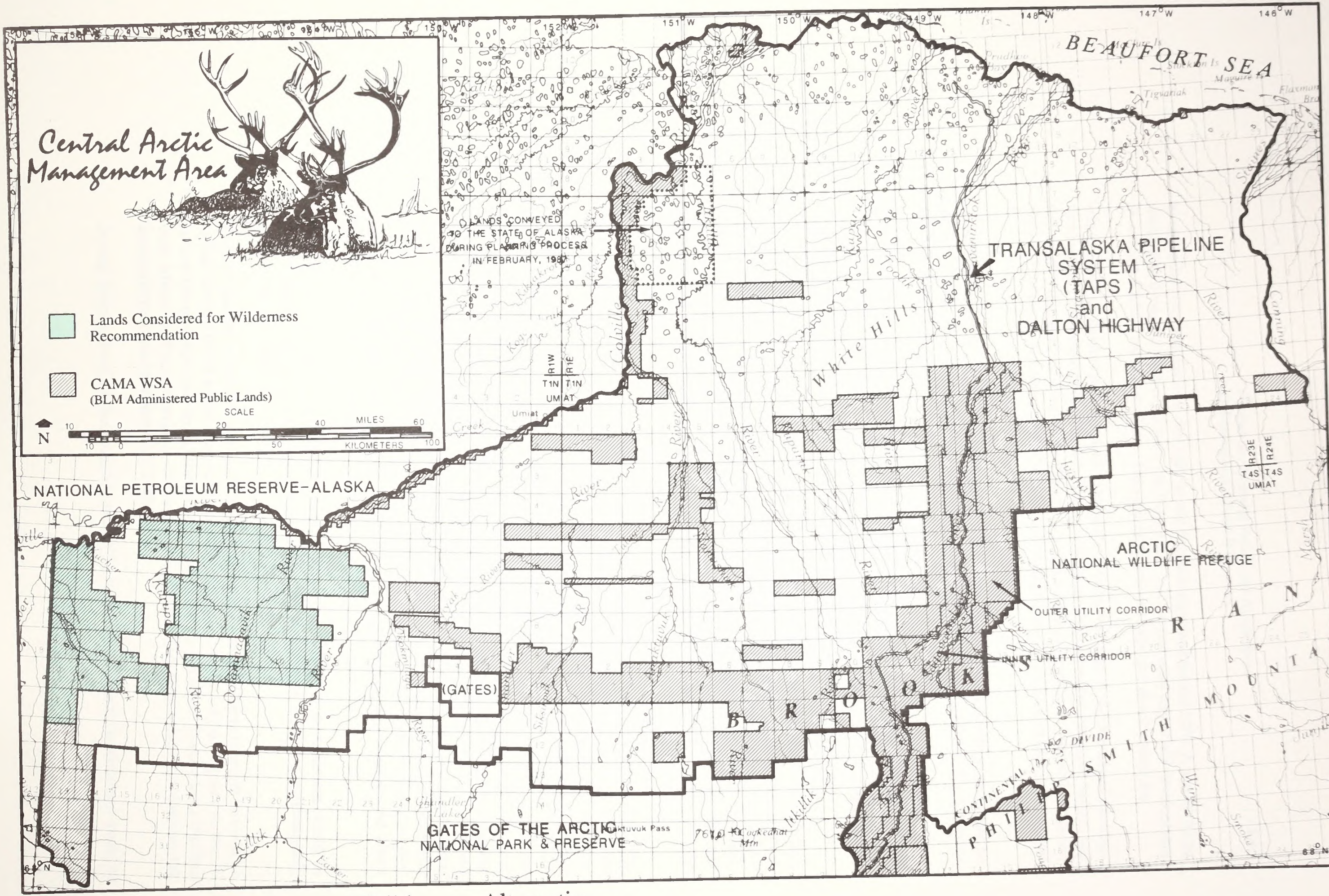
No oil and gas leases currently exist on any CAMA WSA lands. Presumably, all nondesignated CAMA WSA lands with high oil and gas potential would be leased in the future. Therefore, approximately 2,463,000 acres of nondesignated CAMA WSA would be leased.

Leasing on the 2,463,000 acres of high potential lands would result in several phases of development: geological and geophysical (principally seismic) exploration; exploratory drilling; development drilling; and construction of all-season roads, oil transmission pipelines and production facilities. A more complete description of typical development activities appears in the "Energy Resources" section under the Proposed Action. A summary of expected activities for this alternative follows.

Based on past activity, an average of about 500 miles of seismic survey line would be run annually and approximately 20 exploratory wells would be drilled over the next 30 years. Actual development would occur in conjunction with three different pipeline routes. Routes A and C and associated development are the same as under the no wilderness alternative, the Proposed Action, and the partial wilderness alternative. Route B and associated development would not be the same



Map 2-4 Oolamnagavik-Etivluk Wilderness Alternative


Central Arctic Management Area
Lands Considered for Wilderness Recommendation
CAMA WSA (BLM Administered Public Lands)
SCALE
MILES
KILOMETERS
N
BEAUFORT SEA
LANDS CONVEYED TO THE STATE OF ALASKA DURING PLANNING PROCESS IN FEBRUARY, 1987
TRANSALASKA PIPELINE SYSTEM (TAPS) and DALTON HIGHWAY
NATIONAL PETROLEUM RESERVE–ALASKA
ARCTIC NATIONAL WILDLIFE REFUGE
OUTER UTILITY CORRIDOR
INNER UTILITY CORRIDOR
(GATES)
GATES OF THE ARCTIC NATIONAL PARK & PRESERVE
White Hills
BROOKS RANGE
PHILIP SMITH MOUNTAINS
CONTINENTAL DIVIDE
Anaktuvuk Pass
Umiat
R1W R1E T1N T1N UMIAT
R23E R24E T4S T4S UMIAT
Colville
Oolamnagavik
151° W
150° W
149° W
148° W
147° W
146° W
68° N

Map 2-4 Oolamnagavik-Etivluk Wilderness Alternative

as under the other alternatives. Not only would the main pipeline between NPR-A and TAPS be rerouted to avoid the wilderness area, see Figure 2.7, but the potential large field development in western CAMA would not occur. These three routes and expected development are:

Route A (and associated development): Under this alternative Route A and associated development would be the same as described for the no wilderness alternative, the Proposed Action, and the partial wilderness alternative. It represents a pipeline for transportation of oil produced in the National Petroleum Reserve-Alaska (NPR-A) and would connect to TAPS at or near pump station 2.

In total, direct primary surface disturbance of WSA lands under Route A development would be approximately 180 acres; total direct secondary disturbance would be approximately 580 acres (also see Table 2.4).

Route B (and associated development): Route B reflects the probable need for oil transportation from potential discoveries in the southern half of the imbricate fold and thrust belt plays in NPR-A. Under this alternative discoveries are not likely to occur in western CAMA due to the preclusion of oil and gas development in the Oolamnagavik-Etivluk wilderness area.

In order to avoid the Oolamnagavik-Etivluk wilderness area, the Route B pipeline to TAPS is modified from that presented in other alternatives. The anticipated pipeline would cross approximately 90 miles of CAMA WSA lands and about 85 miles of state and private (ASRC) land. Total length of the pipeline would not increase significantly (i.e.less than 5%). However, the new alignment would force more of the pipeline onto nonfederal land. This new Route B alignment would cross an additional approximately 40 miles of private land as compared to the Proposed Action and no wilderness alternative.

Oil field development associated with this pipeline would not be anticipated within the WSA. The main field(s) would be within NPR-A, smaller discoveries, developable once the infrastructure is in place, would be located on state or private land along the pipeline route. A portion of the pipelines and access roads needed to transfer oil from these smaller fields to the main pipeline to TAPS would also cross the WSA (approximately 6 miles). Direct "primary" surface disturbance to WSA lands would be due to the construction of the main Route B pipeline/road to TAPS and "feeder" lines. This would total approximately 96 miles of pipelines/roads. In addition, it is anticipated that within the WSA, along the main pipeline, at least one pump station requiring approximately 40 acres (350,000 cu. yds of gravel) and one temporary construction camp and airstrip requiring approximately 80 acres (540,000 cu.yds of gravel) would be required. A total of approximately 290 acres of surface disturbance would result from excavation of gravel pits (assuming a 10 foot depth). Direct "secondary" surface disturbance, primarily the result of dust and gravel spray along roads, would be limited to 100 feet either side of roads and affect approximately 2,330 acres of land.

In total primary surface disturbance of WSA lands under Route B development would be approximately 890 acres; total direct secondary surface disturbance would be approximately 2,330 acres, see Table 2.4.

Route C (and associated development): Route C and associated development would be the same as described for the no wilderness and partial wilderness alternatives and the Proposed Action. It reflects the potential need for the transportation of fluid minerals to the Trans-Alaska Pipeline from within the Utility Corridor. Proximity to TAPS would greatly reduce construction and transportation costs for discoveries in this area.

In total direct primary surface disturbance of WSA lands under Route C development would be approximately 970 acres; total direct secondary surface disturbance would be approximately 1,940 acres, see Table 2.4.

Table 2.4
Disturbance to WSA lands Resulting from the Oolamnagavik-Etivluk Alternative

Activity	Units	Pipeline Routes Route A	 Route B	 Route C	Totals
Primary Disturbance from the main pipeline to TAPS and feederlines	Miles	24 (84)*	96 (175)*	20 (20)*	140 (279)*
	Acres	120	480	100	700
Primary Disturbance within the development fields, camps, pump stations, etc (excluding gravel pits)	Acres	0	120	550	670
Total Gravel Needs	Cubic Yards	960,000	4,730,000	5,184,000	10,874,000
Gravel Pit Size (Primary Disturbance)	Acres	60	290	320	670
Total Secondary Disturbance	Acres	580	2,330	1,940	4,850
Total Area of Surface Disturbance including Secondary Disturbance	Acres	760	3,220	2,910	6,890

* Figures in parentheses represent total length of main pipeline to TAPS; these figures include those portions of the pipeline on WSA (federal) and nonWSA (state and private) CAMA lands.

Summary: Based on the assumptions and development scenarios described above, surface disturbance from oil and gas development under the Oolamnagavik-Etivluk Wilderness Alternative is summarized below:

Total acres of primary disturbance	2,040 acres
Development fields/pump stations, etc.	670 acres
Main pipelines/roads (i.e. routes A,B,C)	700 acres
Gravel Pits	670 acres
Total acres of secondary disturbanc	4,850 acres
Total surface disturbance	6,890 acres

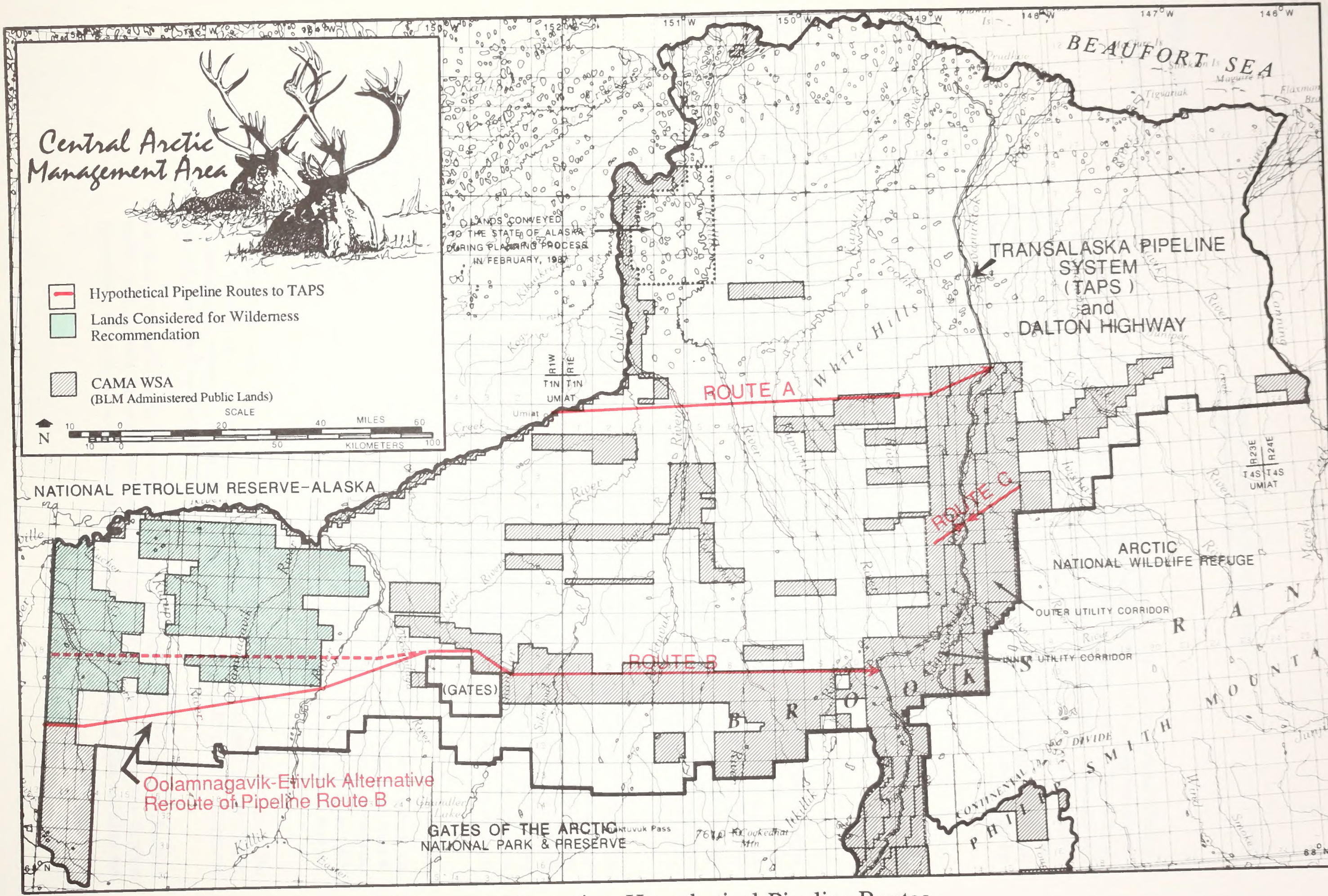


Figure 2.7 Oolamnagavik-Etivluk Wilderness Alternative: Hypothetical Pipeline Routes

WILDLIFE

Management Actions

The wilderness areas would be managed to provide a natural distribution and number of native wildlife species. The remaining CAMA WSA lands would continue to be managed to protect wildlife habitat. Close coordination and cooperation with the Alaska Department of Fish & Game (ADF&G) will continue, especially on management of big game populations. Coordination will also continue with the United States Fish and Wildlife Service (USF&WS) on the banding and monitoring program of the threatened peregrine falcon. The falcon is found along river drainages crossing WSA lands and especially along the Colville River. No additional management actions, other than stipulations to protect habitat as much as possible (see Appendix A), are planned for the CAMA WSA lands.

Anticipated Activities

No activities specific to wildlife or wildlife habitat would occur as a result of this alternative. Activities which would occur and could potentially impact wildlife are as described under the preceding and following sections.

RECREATION

Management Actions

Under the Oolamnagavik-Etivluk alternative, 867,000 acres of land would be closed to general motorized recreational use. However, Sections 811 and 1110 of the Alaska National Interest Lands Conservation Act (ANILCA) contain special provisions for allowance of motorized use, subject to reasonable regulations, in wilderness areas in Alaska for traditional and subsistence purposes. Generally speaking, this allows use of aircraft, motorboats and snowmachines (with adequate snow cover). Designation of this area as wilderness is not expected to cause any immediate change in visitor use as traditional and subsistence uses of the area would not be precluded (this includes traditional sport hunting).

Outside of the designated wilderness area, BLM policy in CAMA restricts use of ORVs to periods of frozen ground and adequate snowcover (except by permit). All recreational ORV use and rifle hunting is prohibited within 5 miles of the Dalton Highway by state law. Use of new oil field roads for hunting and ORV use is expected to be severely curtailed by similar state restrictions. (Note: BLM's recreational regulations require adherence to state laws pertaining to ORVs if more stringent than BLM policy). Outside the nonwilderness assessment area (i.e. lands visible from the Dalton Highway) BLM management would emphasize primitive-traditional recreational opportunities.

Anticipated Activities

Few recreationists currently use the proposed wilderness area. The actual number of users is not known, however, it is estimated that about 80 recreational visitor use days (VUDs) are spent in the Etivluk portion of the wilderness area and about 60 VUDs in the Oolamnagavik portion of the wilderness area. Almost all access to these areas is by aircraft with little or no *recreational* ORV use occurring. Most use of these wilderness areas is sport hunting for caribou, grizzly bear and Dall's sheep.

With other better known and perhaps more appealing wilderness areas nearby in Gates of the Arctic National Park and the Arctic National Wildlife Refuge, recreational use of CAMA wilderness is not expected to increase immediately as a result of designation. In the wilderness areas use would perhaps double in 10 years.

On the nondesignated lands, if the northern portion of the Dalton Highway remains closed to public travel, current use would increase quite slowly. Only tour bus activity may increase appreciably. However, it is anticipated that the road closure will be removed. This will allow and encourage additional growth in recreational use of CAMA. Increased use within the non-wilderness assessment area will be greatest, perhaps doubling within 5 years to about 2,500 annual visitor use days,.primarily due to sightseeing and car camping along the Dalton Highway. On nondesignated WSA lands outside of the nonwilderness assessment area, growth in recreational use is expected to be quite slow as a result of expected state restrictions on use of new roads (similar to those along the Dalton Highway) prohibiting all recreational ORV use and rifle-hunting. Growth in recreational use of these areas would perhaps double in 10 to 15 years before leveling off.

SUBSISTENCE USE ACTIONS

Management Actions

No management action taken as a result of this alternative will restrict the continued subsistence use of the 867,000 acres of WSA recommended for wilderness designation. Subsistence access and use will not be prohibited under wilderness management. Nor would any specific subsistence management actions be taken on nondesignated WSA lands as a result of this proposal. However, certain potentially impacting activities, such as oil and gas development, would be allowed to occur on nondesignated lands under this alternative.

Anticipated Activities

Subsistence use of the designated wilderness area is primarily hunting/trapping within the eastern portion of the Oolamnagavik block by residents of Anaktuvuk Pass. This area represents less than 5% of the Anaktuvuk Pass subsistence use area. Subsistence use of the area is light with access gained primarily by use of snowmachines in winter. Such access and use will not be prohibited under wilderness management. Increased recreational use of the wilderness/subsistence is expected to be light.

The villages of Anaktuvuk Pass, Nuiqsut, Kaktovik and Nolan/Wiseman have historically used at least some portion of the nondesignated WSA for subsistence purposes. Of the four, the subsistence use area of Anaktuvuk Pass encompasses the most WSA land, but this is still less than 7% of their total use area. WSA land encompasses 5% or less of the use areas of the other villages. Activities most likely to cause a change in subsistence use patterns will be related to oil and gas development, primarily due to east-west pipelines. Hypothetical pipeline route B crosses about 120 miles of the subsistence use area of Anaktuvuk Pass; about 60 miles of which is also within the WSA. Hypothetical pipeline route A crosses about 40 miles of the subsistence use area of Anaktuvuk Pass and about 50 miles of the subsistence use area of Nuiqsut; in both cases about 2 miles of this pipeline crossing is also within the WSA.

Table 2.5 SUMMARY OF MANAGEMENT ACTIONS AND ANTICIPATED ACTIVITIES

	Proposed Action	No Wilderness	All Wilderness	Partial Wilderness	Oolamnagavik-Etivluk
Wilderness Recommendation	41,000 acres wilderness.	Zero acres wilderness.	3,364,000 acres wilderness.	486,000 acres wilderness.	867,000 Acres Wilderness.
	3,639,000 acres nonwilderness.	3,680,000 acres nonwilderness	316,000 acres nonwilderness.	3,194,000 acres wilderness.	2,813,000 acres open to mineral location and development.
Locatable Minerals					
Management Actions.	3,639,000 acres open to mineral location and development.	3,680,000 acres open to mineral location and development.	590,000 acres open to mineral location and development.	3,194,000 acres open to mineral location and development.	2,813,000 acres open to mineral location and development
	41,000 acres closed to mineral location and development.		3,090,000 acres closed to mineral location and development.	486,000 acres closed to mineral location and development.	867,000 acres closed to mineral location and development.
Anticipated Activities	One placer mine (250 acres disturbance over life of operation).	Same as Proposed Action.	No mining.	No mining.	Same as Proposed Action.
Energy Resources					
Management Actions	3,639,000 acres open to leasing.	3,680,000 acres open to leasing	590,000 acres open to leasing	3,194,000 acres open to leasing	2,813,000 acres open to leasing.
	41,000 acres closed to leasing.	Zero acres closed to leasing	3,090,000 acres closed to leasing.	486,000 acres closed to leasing.	867,000 acres closed to leasing.
Anticipated Activities	3,330,000 acres leased	Same as Proposed Action.	520,000 leased.	3,067,000 acres leased.	2,463,000 acres leased.
	500 miles geophysical exploration per year		500 miles of geophysical exploration per year.	500 miles of geophysical exploration per year.	500 miles of geophysical exploration per year.
	(Continued next page)		(Continued next page)	(Continued next page)	(Continued next page)

Table 2.5 SUMMARY OF MANAGEMENT ACTIONS AND ANTICIPATED ACTIVITIES

	Proposed Action	No Wilderness	All Wilderness	Partial Wilderness	Oolamnagavik-Etivluk
Energy Resources					
Anticipated Activities (Continued)	30 wildcat wells drilled within 30 years.	Same as Proposed Action.	4 wildcat wells on split estate and nonwilderness assessment area lands within 30 years.	25 wildcat wells within 30 years.	20 wildcat wells within 30 years.
	Six oil/gas fields within CAMA		Two oil fields within CAMA on nonfederal lands.	Six oil/gas fields within CAMA.	Five oil/gas fields within CAMA.
	Three pipeline routes		One pipeline route (mostly on nonfederal lands)	Three pipeline routes.	Three pipeline routes.
	Oil/gas field development in NPR-A		No oil/gas field development in NPR-A.	Oil/gas field development in NPR-A.	Oil/gas field development in NPR-A.
Recreation					
Management Actions	Limited ORV classification outside state closures and outside designated wilderness area.	Limited ORV classification outside state closures.	Limited ORV classification outside state closures and outside designated wilderness area.	Limited ORV classification outside state closures and outside designated wilderness areas.	Limited ORV classification outside state closures and outside designated wilderness areas.
	State closure on ORV use within 5 miles of new development roads and Dalton Highway.	State closure on ORV use within 5 miles of new development roads and Dalton Highway.	State closure on ORV use within 5 miles of new development roads and Dalton Highway.	State closure on ORV use within 5 miles of new development roads and Dalton Highway.	State closure on ORV use within 5 miles of new development roads and Dalton Highway.
	41,000 acres closed to recreational ORV use due to wilderness designation.		3,364,000 acres closed to recreational ORV use due to wilderness designation.	486,000 acres closed to recreational ORV use due to wilderness designation.	867,000 acres closed to recreational ORV use due to wilderness designation.
Anticipated Activities	2000 VUDs per year within CAMA. VUDs expected to double within 20 years.	Same as Proposed Action.	Same as Proposed Action.	Same as Proposed Action except VUDs expected to double within 15 years.	Same as Partial Wilderness Alternative.

Table 2.6 COMPARATIVE SUMMARY OF IMPACTS BY ALTERNATIVES

Wilderness Values

Proposed Action	No Wilderness	All Wilderness	Partial Wilderness	Oolamnagavik-Etivluk
Wilderness values would be preserved on 41,000 acres by wilderness designation of the Nigu Block. Access to WSA lands by airplanes and unauthorized ORV's would cause temporary impacts on naturalness and solitude. On nondesignated WSA lands seismic exploration would degrade naturalness by causing "green trails" that would be visible from the air for two or three years. Placer mining would cause wilderness values to be degraded or to be lost on 23,000 acres. Exploratory drilling would temporarily disturb wilderness values on 300 acres over a 30-year period. Oil and gas production and development would affect wilderness values on 1.1 million acres of WSA lands and 527,000 acres of state and ASRC lands.	Impacts to wilderness values would be the same as with the Proposed Action, i.e., access to WSA lands by airplanes and unauthorized ORV's would cause temporary impacts on naturalness and solitude. On nondesignated WSA lands seismic exploration would degrade naturalness by causing "green trails" that would be visible from the air for two or three years. Placer mining would cause wilderness values to be degraded or to be lost on 23,000 acres. Exploratory drilling would temporarily disturb wilderness values on 300 acres over a 30-year period. Oil and gas production and development would affect wilderness values on 1.1 million acres of WSA lands and 527,000 acres of state and ASRC lands.	Wilderness values would be preserved on 3,364,000 acres by wilderness designation.	Wilderness values would be preserved on 486,000 acres by wilderness designation. On nondesignated lands impacts from placer mining and geological exploration would be the same as with the Proposed Action. Exploratory drilling would temporarily disturb wilderness values on 250 acres over a 30-year period. Oil and gas development and production would affect wilderness values on 1,028,320 acres of WSA lands and 568,000 acres of state and ASRC lands.	Wilderness values would be preserved on 867,000 acres by wilderness designation. On nondesignated lands impacts from motorized use, placer mining, geological, and geophysical exploration would be the same as with the Proposed Action. Exploratory drilling would temporarily disturb 200 acres over a 30-year period. Oil and gas development and production would affect wilderness values in 800,920 acres of WSA lands and 731,000 acres of state and ASRC lands.

Table 2.6

COMPARATIVE SUMMARY OF IMPACTS BY ALTERNATIVES

Oil and Gas Development and Transportation Routes

Proposed Action	No Wilderness	All Wilderness	Partial Wilderness	Oolamnagavik-Etivluk
It is anticipated that about 3,365,000 acres would be leased for oil and gas development. Thirty wildcat wells would be drilled in the WSA within a 30-year period, and six oil and gas fields would be developed within CAMA. It is anticipated that three oil/gas pipelines would be constructed and perhaps two of these routes would extend to oil/gas fields outside CAMA within the NPR-A. An annual average of 500 miles of geophysical exploration would occur. Since all WSA lands with high potential would be open to development, wilderness designation would not affect potential oil and gas development or associated oil/gas transportation systems.	Same as Proposed Action.	Potential oil and gas development on 3,090,000 acres would be foregone; potential for development of oil and gas resources in the southern portion of NPR-A would be reduced because the most practicable transportation routes would be precluded. Development on other CAMA lands would also be restricted. All wilderness would preclude the following anticipated activities: one placer mining operation, expected oil and gas leasing on 2,810,000 acres with high oil and gas potential (84% of the WSA lands with high potential), 26 wildcat wells within a 30-year period, development of four oil and gas fields within CAMA, and the probability of developing and producing oil from southern NPR-A.	Although 3,194,000 acres would be open to development, only 3,067,000 acres of high potential lands would be leased. It is anticipated that 25 wildcat wells would be drilled on WSA lands within 30 years, 6 oil and gas fields would be anticipated within CAMA. Three pipeline routes would be developed within CAMA, two of which would extend to NPR-A. Costs of pipeline access to NPR-A across southern CAMA would be slightly higher as a result of this alternative. On nondesignated lands geophysical exploration would be similar to that described for the Proposed Action.	Potential development on 867,000 acres (26% of the WSA with high potential for oil and gas occurrence) would be foregone. This would preclude an anticipated 10 wildcat wells within a 30-year period and one oil field. It is anticipated that 2,463,000 acres would be leased. About 20 wildcat wells would be drilled on WSA lands within a 30-year period. Five oil and gas fields would be anticipated within CAMA and at least one field outside CAMA in NPR-A. To transport the oil or gas, three pipeline routes would be anticipated, one of which would cross southern CAMA to NPR-A. Overall cost of this pipeline could be 5 to 10 percent higher than with the Proposed Action.

Table 2.6

COMPARATIVE SUMMARY OF IMPACTS BY ALTERNATIVES

Locatable Minerals

Proposed Action	No Wilderness	All Wilderness	Partial Wilderness	Oolamnagavik-Etivluk
Although 3,639,000 acres would be open to mineral location and development outside the designated wilderness, only one placer mine would be expected. This would disturb an estimated 250 acres over the life of the mining operation.	Although 41,000 more acres than under the Proposed Action would be open to mineral location and development, the anticipated level of mineral activity would be the same as described for the Proposed Action.	Since 3,090,000 acres would be closed to location and entry, one placer mine would be precluded.	Although 3,194,000 acres would be open for development, no mining would be anticipated because much of the area with the greatest likelihood for a placer operation would be closed to location and entry as a result of this alternative. Therefore, one placer mine would be precluded.	Although less area would be open to mineral location and development (2,813,000 acres) as compared to the partial wilderness alternative, the amount of mining activity would be the same as the no wilderness/no action alternatives (and Proposed Action) because the area with the greatest likelihood for a placer operation would be open to entry and location.

Table 2.6 COMPARATIVE SUMMARY OF IMPACTS BY ALTERNATIVES

Big Game Wildlife and Habitat

Proposed Action	No Wilderness	All Wilderness	Partial Wilderness	Oolamnagavik-Etivluk
There would be no additional impacts to wildlife populations or their habitats on the designated 41,000 acre Nigu Block. Oil and gas development, construction and use of pipelines, and placer mining would cause approximately 3,800 acres of direct loss of habitat as well as 63,000 acres of indirect disturbance on WSA lands not designated as wilderness. These impacts to wildlife populations and their habitats would be minimal because of the overall size of the area (3,680,000 acres of land within the CAMA WSA), and the location of the development activities in relationship to crucial wildlife habitat.	Impacts to big game wildlife habitat and populations would be similar to those described for the Proposed Action.	Wilderness designation would provide long term protection to wildlife and their habitats, particularly moose and grizzly bear crucial areas, riparian zones, and Dall's sheep habitat along the southern mountainous portions of CAMA.	There would be no additional impacts to wildlife populations or their habitats on the designated 486,000 acres of wilderness. Oil and gas development, and construction and use of pipelines would cause approximately 3,500 acres of direct loss of habitat as well as 58,000 acres of indirect disturbance on nondesignated WSA lands. These impacts to wildlife populations and their habitats would be minimal because of the overall size of the area and the location of the development activities in relationship to crucial wildlife habitat.	There would be no additional impacts to wildlife populations or their habitats on the designated 867,000 acres of wilderness. Oil and gas development, and construction and use of pipelines would cause approximately 2,500 acres of direct loss of habitat as well as 49,000 acres of indirect disturbance on nondesignated WSA lands. These impacts to wildlife populations and their habitats would be minimal because of the overall size of the area and the location of the development activities in relationship to crucial wildlife habitat.

Table 2.6 COMPARATIVE SUMMARY OF IMPACTS BY ALTERNATIVES

Recreational ORV Use

Proposed Action	No Wilderness	All Wilderness	Partial Wilderness	Oolamnagavik-Etivluk
Wilderness designation or nondesignation would not affect the amount or type of ORV use within the CAMA WSA.	Same as the Proposed Action.	Same as the Proposed Action.	Same as the Proposed Action.	Same as the Proposed Action.

Table 2.6 COMPARATIVE SUMMARY OF IMPACTS BY ALTERNATIVES

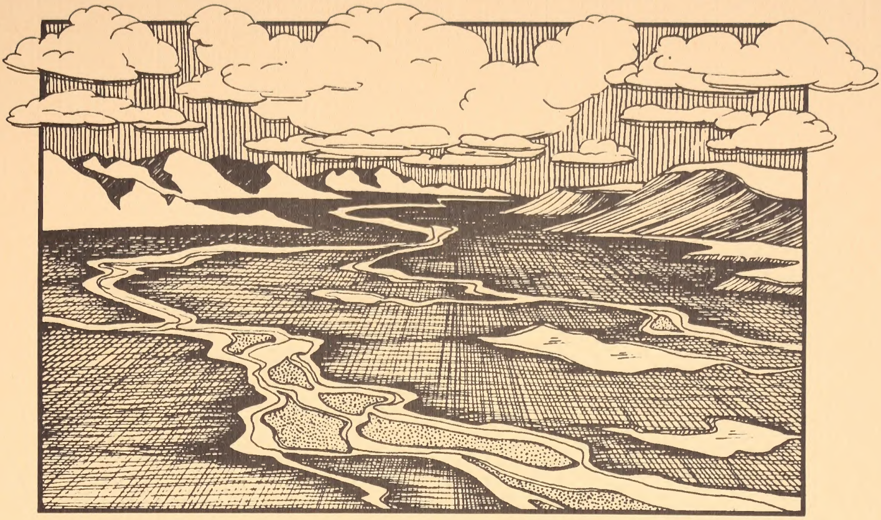
Subsistence

Proposed Action	No Wilderness	All Wilderness	Partial Wilderness	Oolamnagavik-Etivluk
There would be potential adverse effects on subsistence use patterns in the areas not designated as wilderness. Some of these impacts could be temporary, but some may be long-term. There would also be a potential impact to subsistence use patterns if a pipeline were built along route B; however, mitigation measures that would be determined and applied at such time would cause an actual significant restriction to subsistence to be unlikely. Furthermore, because of the small areas involved in the total subsistence land usage of the villages using the WSA, the Proposed Action would result in no significant restriction to subsistence uses or resources for any of the villages using the WSA lands for that purpose.	Same as the Proposed Action.	There would be no adverse effects on subsistence use patterns or resources.	Although pipeline B is rerouted from the no wilderness alternative to avoid the Oolamnagavik block wilderness area, the total affected subsistence area used by Anaktuvuk Pass Village would not change. There would be no mining to affect the Nolan/Wiseman subsistence area. Otherwise the impacts would be the same as the Proposed Action.	Although pipeline B is rerouted from the no wilderness alternative to avoid the Oolamnagavik wilderness area, the total affected subsistence area used by Anaktuvuk Pass Village would not change. Therefore, the impacts would be the same as the Proposed Action.

Table 2.6 COMPARATIVE SUMMARY OF IMPACTS BY ALTERNATIVES

Socioeconomic Impacts

Proposed Action	No Wilderness	All Wilderness	Partial Wilderness	Oolamnagavik-Etivluk
This alternative would not preclude potential future oil and gas or mining development. This development could create oil development related jobs, of which less than 3% would accrue to local rural residents. This oil and gas development would also generate public revenues to Alaska from revenue sharing of royalty payments, severance taxes, and property taxes.	Same as Proposed Action.	This alternative would greatly reduce the potential for future oil and gas and placer mining related employment, income, population, and public revenues as long as the area is managed for wilderness.	This alternative would not prevent future increases in employment, income, population, and public revenues associated with oil and gas development. No mining related employment would be anticipated.	Same as Proposed Action except the level of development is anticipated to be 20-30% less because one less oil field would be developed.



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Affected Environment

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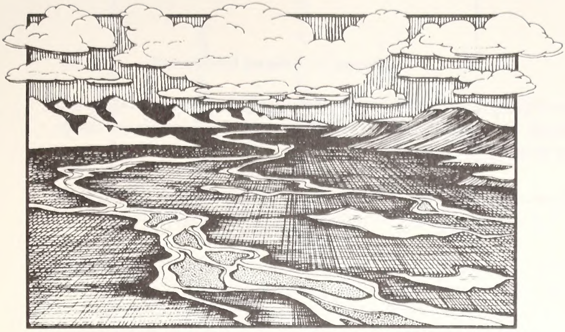


CHAPTER 3

AFFECTED ENVIRONMENT

INTRODUCTION

This Section briefly describes the environmental setting of the 3,680,000 acres of land that make up the Central Arctic Management Area Wilderness Study Area (CAMA WSA). This description of CAMA WSA lands focuses on the resources likely to be impacted by wilderness designation or nondesignation, or that are related to the environmental issues stated in Chapter 1. This chapter also provides background information and data for use by decision makers and other interested parties.

As stated in the Summary and Chapter One the term "CAMA" will be used to refer to all lands (federal, state, and private), included in the boundaries described by Section 1001 of the Alaska National Interest Lands Conservation Act of 1980 (ANILCA). Within CAMA only federal lands, exclusive of parks and refuges, are considered part of the CAMA WSA. Land ownership within the ANILCA 1001 boundaries (i.e. CAMA) is continuously changing. The Alaska Statehood Act of 1958 and the Alaska Native Claims Settlement Act of 1971 authorized millions of acres of land to be transferred from federal ownership to the State of Alaska and to Native Corporations. Since this planning process began, over 300,000 acres of former WSA land has been conveyed to the State of Alaska and exchange proposals involving thousands of acres of federal land have been contemplated. Furthermore, the boundary of the National Petroleum Reserve-Alaska has been corrected, adding over 300,000 acres of land to the CAMA WSA (exact boundary location and acreages involved cannot be determined until survey is accomplished). During this study process future conveyances, exchanges, surveys, and other authorized land actions are likely to continue changing the study area.

GENERAL DESCRIPTION

The CAMA WSA lands are located entirely within the North Slope Borough, Alaska. Interspersed among and around the approximately 3.7 million acres of WSA lands are approximately 9 million acres of private land. The National Petroleum Reserve-Alaska (NPR-A), Gates of the Arctic National Park and the Arctic National Wildlife Refuge (ANWR), are the boundaries of the CAMA described by Sec. 1001 of ANILCA.

The majority of WSA lands are characterized by foothills and uplands of the northern fringe of the Brooks Range, but also included is a portion of the topographically featureless arctic coastal plain. Relief on WSA lands along the central and northern portion of CAMA is limited to shallow drainages with periodic major streams that exhibit very broad flood plains and braided stream channels. An occasional pingo (ice cored mound) forms an anomaly on an otherwise very flat, water-laden, tussock-covered landscape. Permafrost to varying depths, generally beginning about 18-20 inches from the surface, underlies most of the lands in this region. Most of the WSA lands are laced with drainages originating within the Brooks Range which eventually empty into the Beaufort Sea and Arctic Ocean. The Colville River, the largest river on the North Slope, carries the bulk of the drainage water to the Arctic Ocean.

Lands within CAMA range in elevation from 5,000 feet in the southwestern corner to sea level at the coast. However, most WSA lands are between 500 and 2,500 feet in elevation.

The Dalton Highway, currently not open to public travel within CAMA, runs north from Fairbanks, Alaska, through the eastern portion of CAMA to Prudhoe Bay. This is the only overland transportation route to or through CAMA. There are no major resident populations located within CAMA nor on CAMA WSA lands. At any one time, a transient population of approximately 2,700 people is located at Prudhoe Bay. The villages of Anaktuvuk Pass (population less than 300) and Nuiqsut (population less than 350) are the nearest resident populations, both are located outside of CAMA.

DISTRIBUTION OF WILDERNESS AREAS

The State of Alaska contains a number of designated wilderness areas, see Figure 3.1. All current wilderness areas within the State of Alaska were designated by the passage of ANILCA on December 2, 1980. As of January 1981, Alaska contained 56,276,899 acres of designated wilderness. An additional approximately 49,754,000 acres is being or soon will be reviewed for possible wilderness designation.

WILDERNESS VALUES

Naturalness

Human influences on CAMA WSA lands are generally unnoticeable; WSA lands overall appear to have been affected only by the forces of nature. However, remnants of past oil and gas exploration can be seen in the central and northern portions of CAMA. Although most of these sites are on State or Native lands several old seismic trails do cross CAMA WSA lands. In most cases, only subtle vegetation differences visible from the air and difficult to see on the ground still exist. Overall, these are not significant detractors to the naturalness of the area.

Found on CAMA WSA lands are the major land forms present elsewhere north of the Brooks Range. To the south this is characterized by the rugged mountainous terrain and foothills of the Brooks Range. This changes to the rolling hills characteristic of most WSA lands and finally to the flat terrain of the coastal plain. Many braided rivers and streams flow south to north across CAMA lands eventually draining to the Beaufort Sea.

Opportunities for Solitude

Topography varies greatly within the WSA from rugged mountains in the south to rolling foothills and flat coastal plains in the north. Each of these topographic regions influences opportunities for solitude differently.

Natural screening on WSA lands is lacking in the central and northern portions of CAMA due to the generally flat relief and lack of trees and tall shrubs. On some of the smaller blocks of northern and central WSA lands, stream and river drainages are the only areas protected from possible adverse impacts associated with sights and sounds "outside" of the WSA. Some blocks of federal land, such as the Oolamnagavik block in the central portion of CAMA, are of sufficient size that "outside" sights and sounds could be avoided. On WSA lands in the foothills portion of CAMA, screening is provided by a combination of distance and relief. Within the mountainous portions of the southern WSA lands, steep previously glaciated canyons are intermingled with precipitous mountain peaks. Most of the mountain slopes are of a talus nature and difficult to traverse. Some of the wider basins within the mountainous sections provide potential access.

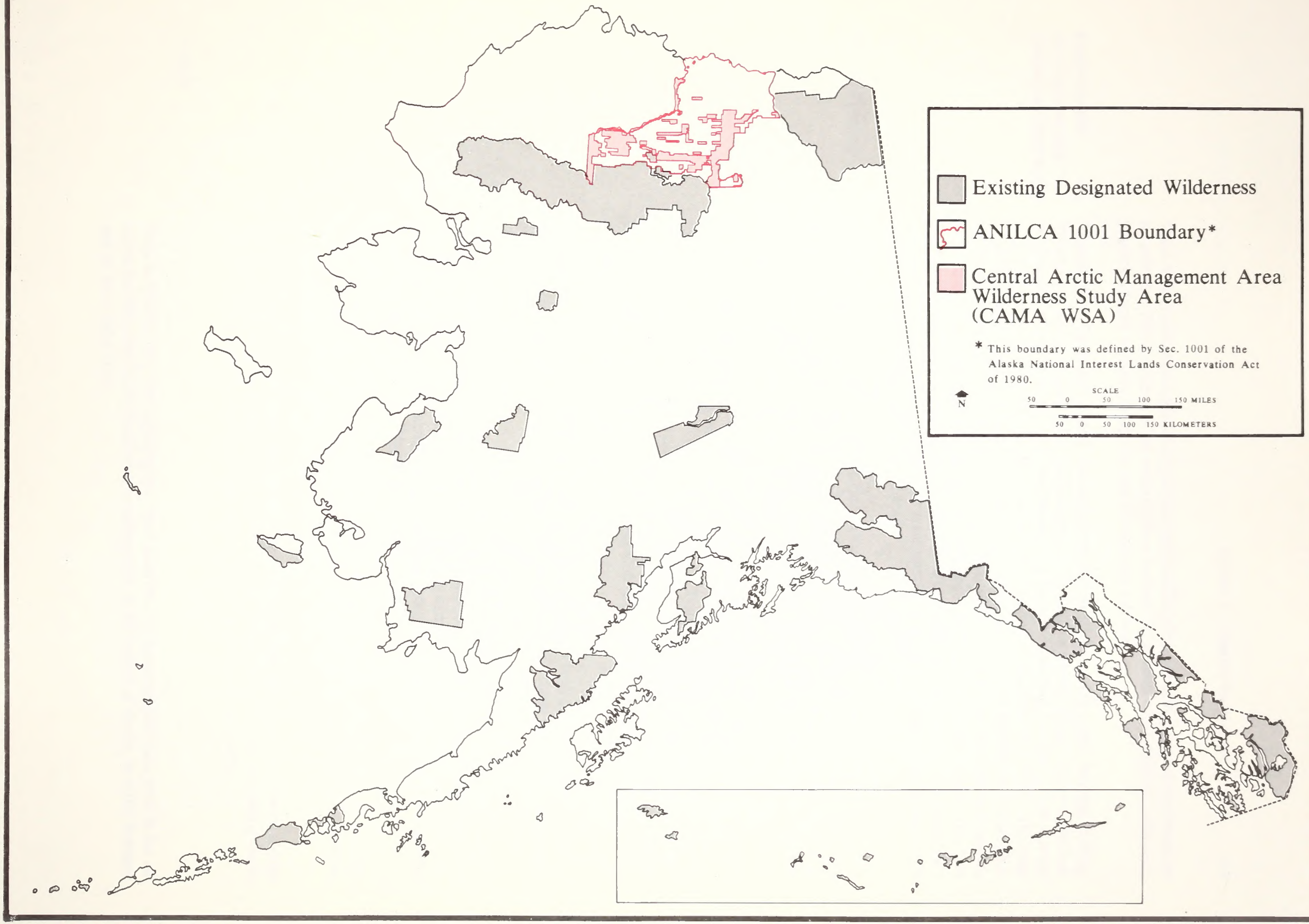

Existing Designated Wilderness
ANILCA 1001 Boundary*
Central Arctic Management Area Wilderness Study Area (CAMA WSA)
* This boundary was defined by Sec. 1001 of the Alaska National Interest Lands Conservation Act of 1980.
N
SCALE
50 0 50 100 150 MILES
50 0 50 100 150 KILOMETERS

Figure 3.1 Designated Wilderness Areas in Alaska

Those WSA lands in the southern mountains and foothills possess excellent to good opportunities for solitude. This is not true of the arctic plain or northern WSA lands where distance is the most important factor in determining the opportunities for solitude.

Opportunities for Primitive and Unconfined Recreation

Opportunities for primitive and unconfined recreation exist for big game hunting, fishing, sightseeing, hiking, photography, floatboating and limited horseback riding. However, the lack of adequate access over the vast wet tundra is a barrier restricting movement and activity throughout most of the WSA lands in the central and northern portions of CAMA. The only feasible access existing in these areas is along major drainages that cross these lands. Those WSA lands in the southern foothills and mountainous areas, although of a more rugged terrain, provide much better access opportunities than those lands to the north. Although no trails exist, other than game trails, numerous drainages and dry upland areas provide excellent opportunities for the hiker and horseback rider. Consequently these areas provide a greater opportunity for primitive and unconfined recreation than areas to the north.

Special Features

CAMA WSA lands contain numerous special features that add to their importance. Among them is the Colville River area with its important nesting sites for various birds; most importantly, the threatened arctic peregrine falcon (*Falco Peregrinus tundrius*). The Colville River itself is an untrammelled, unique arctic riverine ecosystem (however north of Umiat the river and riverbed belong to the state of Alaska).

The Heritage Conservation Recreation Service study (NPR-A, 1979) and the Alaska National Interest Lands Conservation Act (ANILCA, 1980) mandated that the Colville River be looked at for possible inclusion into the Wild and Scenic River System. The river was nominated because it possesses outstanding and unique arctic riverine attributes. However, Congress did not include this river into the National Wild and Scenic River System. The BLM through the Utility Corridor RMP has noted the special qualities within the Colville River system and has recommended a habitat management plan be developed for the area.

The CAMA area and CAMA WSA provide year long range for both caribou and moose. River drainages also provide important habitat for grizzly bears. Dall's sheep inhabit the most rugged mountainous areas.

Numerous archaeological sites are located on WSA lands; most are at isolated spots usually located along rivers and lakes. WSA lands are thought to possess many archaeological sites of significance, however, very little of the area has been intensively inventoried. One known site, the Mesa, located on WSA lands in the southwestern portion of CAMA, has been recommended to be placed on the National Register of Historic Places.

The mountainous terrain located adjacent to the Dalton Highway corridor and the foothills fronting the Brooks Range contain excellent opportunities to view unique geological formations, including picturesque hanging glaciers.

The WSA lands offer excellent opportunities for viewing and studying arctic ecosystems and for other research on the arctic environment. Currently, the University of Alaska, and other research groups are using WSA lands to conduct arctic research and education programs.

SOILS

Soils in CAMA vary with topography. Most soils are fine-textured materials, such as the silt loams and silty clay loams found on low rolling hills, at the bottom of slopes, in valley bottoms, and on the coastal plain.

Permafrost generally begins at depths of about 20 inches and acts to retard ground water drainage of soils. The poor drainage, combined with low soil temperatures, has resulted in soils with wet, shallow, poorly differentiated profiles with significant organic components that are hardly decomposed. These soils are highly susceptible to erosion, particularly when disturbance of ground covering vegetation causes permafrost thawing. The processes of frost heaving and sorting, ice lens and wedge formation and thawing, solifluction, and stream erosion have developed these soils into a complex mosaic of polygons, ice-cored mounds (pingos), terraces, and remnant oxbows. A few soils, especially those in depressions, have a sufficient thickness of organic materials (peat) to be termed organic soils.

The high ridges in the foothills region of the WSA consist of steep exposed bedrock and unstable talus slopes with inclusions of poorly drained or very poorly drained gravelly and stoney soils.

MINERAL RESOURCES

Oil and Gas

Trapping Mechanisms and Oil and Gas Potential

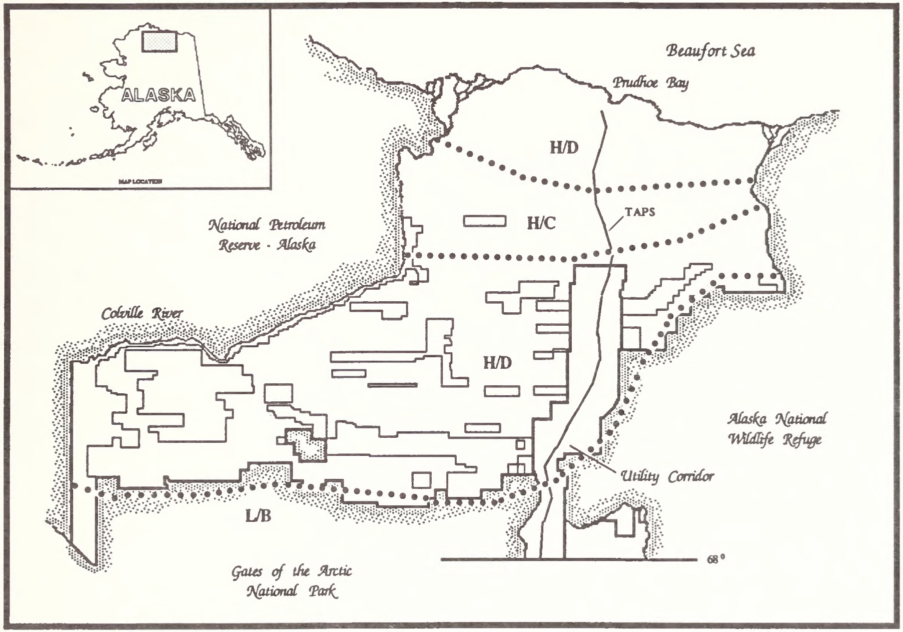
The structural style in CAMA ranges from the complex foreland fold and thrust belt in the proximity of the Brooks Range to the relatively simple regional Colville and Prudhoe Highs. The structural style of an area combined with its depositional and erosional history control the kinds of oil and gas traps found. CAMA contains combinations of both stratigraphic and structural traps. The hydrocarbon potential boundaries, Figure 3.2, roughly divide CAMA into these structural zones.

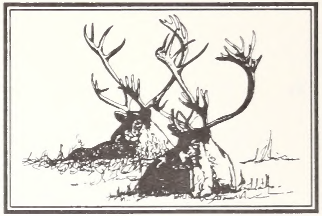
The northern half of CAMA is dominated by a southward regional dip with the rocks of Ellesmerian sequence becoming shallow to the north and overlapping on the Barrow arch. The Barrow arch is a positive subsurface feature stretching hundreds of miles from Point Barrow, through Prudhoe Bay, to the northwestern portion of the ANWR coastal plain, see Figure 3. 3. The arch is an important axis controlling the location of the giant and super giant oil fields on the north slope (Bird, 1985).

The regional Prudhoe and Colville highs formed along this arch. The Prudhoe High combined with the down dropped faulting to the north and the truncation of the Saderlochit formation forms the four way closure for the Prudhoe field. The Kuparuk oil field is located between the Colville and Prudhoe highs with the dominate trapping mechanism being stratigraphic (Carman and Hardwick, 1983).

The majority of CAMA lands are in the complex foreland fold and thrust belt. The northern boundary of this zone is approximately delineated by the southern boundary line of the H/C zone shown in the hydrocarbon potential map. Systems of thrust faults such as duplex and imbricated thrust systems are now increasingly known as unexplored locations of hydrocarbon traps (Mitra, 1986). Although there have been no commercial discoveries as yet in the southern one-half of CAMA, the Kavik, Kemik, Gubik and East Umiat gas fields, with reserves of approximately 1 trillion cubic feet each, have been identified along the numerous oil and gas shows.

The northern two-thirds of this fold and thrust belt is dominated by imbricated structures composed on rocks of early to late Cretaceous age. Potential reservoirs include the Kemik, Fortress Mountain and Nanushak Sandstones. The surface expression of these anticlinal trends appear to be the site of most of the exploratory drilling completed to date. The complexity of these zones reduce the expected maximum size of any structural trap within this zone.


ALASKA
MAP LOCATION
Beaufort Sea
Prudhoe Bay
H/D
H/C
TAPS
National Petroleum Reserve - Alaska
Colville River
H/D
Alaska National Wildlife Refuge
Utility Corridor
L/B
68°
Gates of the Arctic National Park



Mineral Potential Classification System

Level of Certainty

B. The available data provide indirect evidence to support or refute the possible existence of mineral resources.

C. The available data provide direct evidence, but are quantitatively minimal to support or refute the possible existence of mineral resources.

D. The available data provide abundant direct and indirect evidence to support or refute the possible existence of mineral resources.

• • • • • Hydrocarbon Potential Boundary

Level of Potential *

L. The geologic environment and the inferred geologic processes indicate low potential for accumulation of mineral resources.

H. The geologic environment, the inferred geologic processes, the reported mineral occurrences and/or valid geochemical/geophysical anomaly, and the known mines or deposits indicate high potential for accumulation of mineral resources. The "known mines and deposits" do not have to be within the area that is being classified, but have to be within the same type of geologic environment.

*As used in this classification, potential refers to potential for the presence (occurrence) of a concentration of one or more energy and/or mineral resources. It does not refer to or imply potential for development and/or extraction of the mineral resource(s). It does not imply that the potential concentration is or my be economic, that is, could be extracted profitably.

Figure 3.2 Central Arctic Management Area Oil and Gas Potential

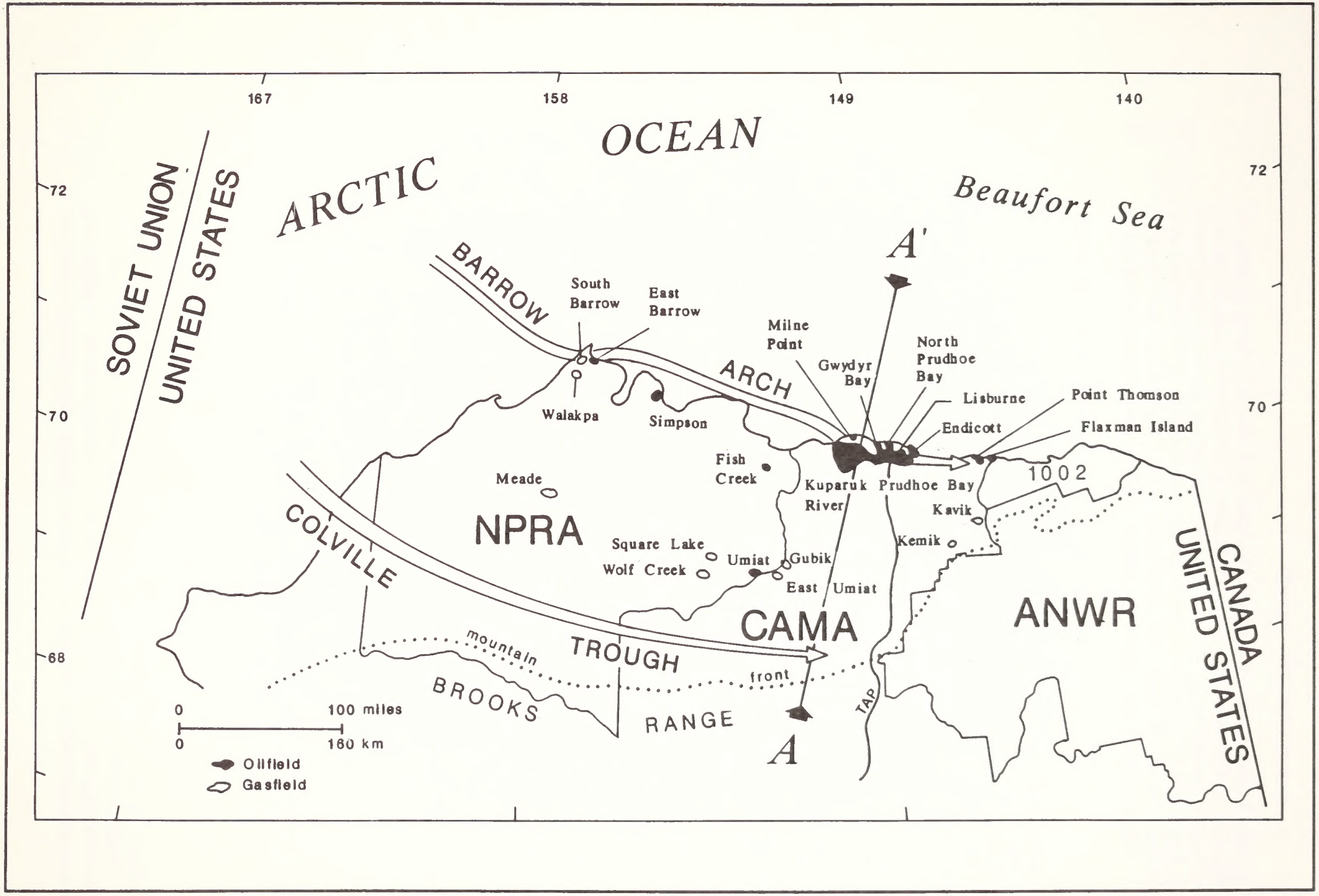


Figure 3.3 NPRA, CAMA, and ANWR 1002 Oil and Gas Discoveries (after Bird, 1981)

The southern one-third of this zone is expected to be dominated by structures formed by thrust repeated Lisburne formations. An example of this setting is the Lisburne No. 1 well, which was drilled through five thrust repetitions of the Lisburne Group. Thrust faulting, which is common in the foreland fold and thrust belt, emplaces older rocks over younger rocks making it difficult to compare outcrop petroleum geology to that of the subsurface. The reservoir rock with the greatest potential is the dolomite and recrystalized limestone of the Lisburne Group.

Assessment of Oil andGas Potential

The likelihood of finding oil and gas is rated using the BLM mineral classification system (Appendix B). The BLM assessment rating measures how likely it is to find oil and gas. It does not specify the oil and gas volume present or the economics of its development. Ratings are made on the presence or absence of the necessary conditions for the generation, storage, and continued entrapment of oil and gas in given area. In addition, the quality of the data used in the assessment and its completeness is evaluated. The oil and gas potential map is the result of this analysis.

Nearly all of CAMA has been rated as having high potential or oil and gas. The middle zone, although it has been rated as having a high potential, has been given a certainty rating of "C" because only three wells have been drilled in the area. The northern and southern zones have both been given "H/D" ratings with the northern zone containing the largest and second largest producing oil and gas fields in North America (Prudhoe Bay and Kuparuk) and the southern zone containing four noncommercial gas fields and a great number of potential oil and gas traps.

Table 3.1
CAMA WSA Oil and Gas Potential in Acres

	Status		
Mineral Potential	BLM Fee Simple Lands	BLM Surface Management	Total
High /D	2,906,000	274,000	3,180,000
High/C	150,000	0	150,000
Low /B	350,000	0	350,000
No Potential	0	0	0
Total	3,406,000	274,000	3,680,000

Minimum Economic Field Size for CAMA

Minimum economic field sizes (MEFSs) for CAMA were determined using the same methodology used in the Arctic National Wildlife Refuge (ANWR) Resource Assessment Report. MEFS is defined as the smallest volume of hydrocarbon reserves that will pay the cost of extracting and marketing the resource under expected economic conditions and which will provide the investor a rate of return on capital equal to or greater than the rate anticipated from projects of similar risk. The following assumptions were made in determining MEFS for CAMA:

1. Prospects are developed at 7,500 and 15,000 feet in depth with reservoirs similar to Kuparuk and Lisburne fields;

2. These two locations are 100 miles south of Prudhoe Bay along the TAPS pipeline and 150 miles west of Pump Station 3; and

3. Transportation and development costs are significantly higher for prospects developed away from existing pipelines and roads.

The MEFS for prospects within 100 miles of Prudhoe Bay and the existing pipeline facilities are estimated to be between 200 and 250 million barrels of economically recoverable oil, while the MEFS for more remote prospects are estimated to be between 475 and 575 million barrels of economically recoverable oil. Prospects not as remote as 150 miles from the pipeline will fall between these ranges. Oil and gas prospects very near or within the TAPS Utility Corridor will have an obvious economic advantage due to the nearness to the TAPS facilities

Coal

Coal is known to exist within the WSA. However, because of the economics of production; lack of infrastructure; depth of beds; abundance, availability and cheaper production costs of coal elsewhere in the state and nation, coal is considered undevelopable for the foreseeable future.

Locatable Minerals

There has been no thorough analytical mineral potential evaluation of WSA lands and no extensive exploration is known to have taken place. However, based upon the similarity of rocks found within the National Petroleum Reserve-Alaska and further west at the Red Dog and LIK Properties, the potential on WSA lands within the northern foothills and Brooks Range portion of CAMA should be considered moderate (approximately 336,000 acres). As more sampling of existing mineral terranes occur these mineral potential evaluations may change. The remainder of the WSA lands (approximately 3,344,000 acres) are classified as having a low potential for locatable minerals.

Presently only the "outer" Utility Corridor is open to mineral location. In January of 1987 there were 19 properly located and maintained mining claims (located for placer gold and/or silver) within the WSA, all within the "outer" Corridor. By May of 1988 there were 13 remaining claims.

The following is a brief description of mineral potential of various CAMA WSA lands, also see Table 3.2 and Figure 3.4.

Low Potential:. The region of low potential within CAMA is from the northern flank of the Brooks Range across the foothills to the Arctic Ocean. The area is characterized by thick sedimentary rock; indirect geophysical evidence suggesting a low potential. The area's mineral potential is assigned a ranking of "Low/B" (BLM Manual 3031).

Moderate Potential: Within CAMA, the areas of moderate potential consist of a zone of rock which leads from the southern boundary within the Utility Corridor to the crest of Atigun Pass and the area known as the Nigu Block (Proposed Action wilderness lands) adjacent to the National Petroleum Reserve-Alaska lands. These areas are characterized by metamorphic rocks and intruded granitic plutons that have formed favorable areas of mineral deposits. There is direct evidence supporting the occurrences of these deposits, but not enough evidence to quantify the size of any deposit. These areas of moderate potential have been assigned a ranking of "Moderate/

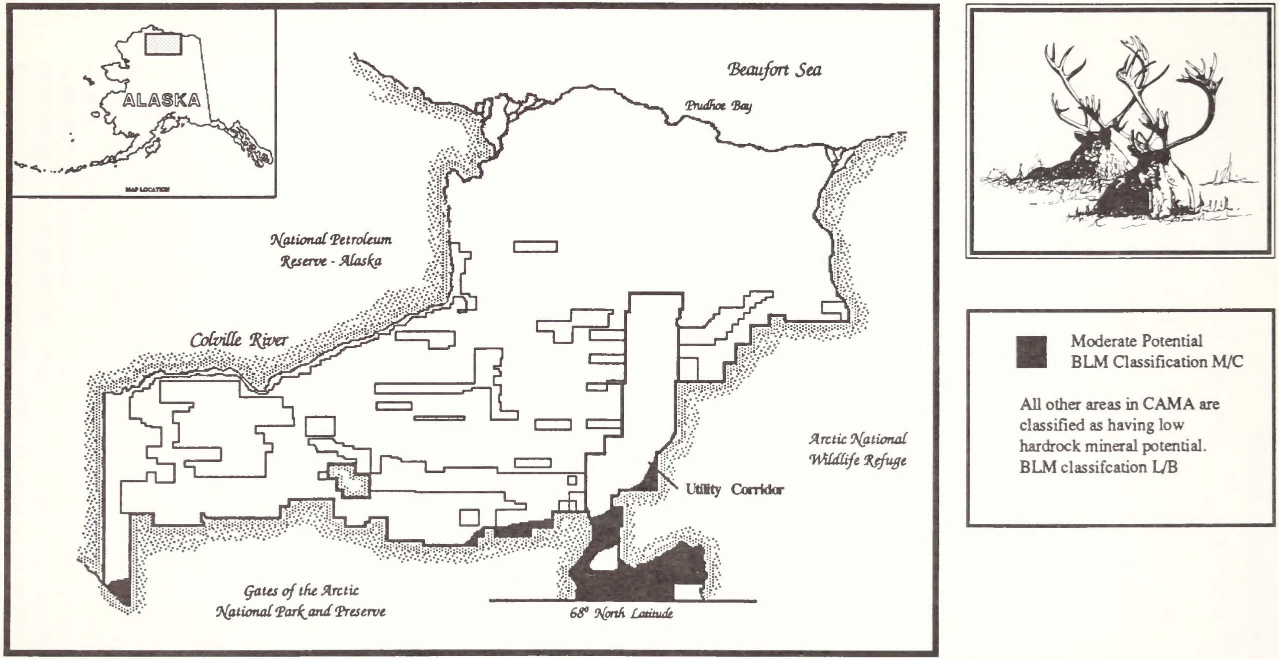

ALASKA
MAP LOCATION
Beaufort Sea
Prudhoe Bay
National Petroleum Reserve - Alaska
Colville River
Arctic National Wildlife Refuge
Utility Corridor
Gates of the Arctic National Park and Preserve
68° North Latitude
Moderate Potential BLM Classification M/C
All other areas in CAMA are classified as having low hardrock mineral potential. BLM classifcation L/B

Figure 3.4 Central Arctic Management Area Locatable Mineral Potential

C" (BLM Manual 3031).

High Potential: There are no high mineral lands found within CAMA.

See Appendix "B" for BLM's Mineral Classification System (BLM Manual 3031).

Table 3.2
CAMA WSA Locatable Mineral Potential in Acres

	Status		
Mineral Potential	BLM Fee Simple Lands	BLM Surface Management	Total
High	0	0	0
Moderate/C	330,000	6,000	336,000
Low/B	3,076,000	268,000	3,344,000
No Potential	0	0	0
Total	3,406,000	274,000	3,680,000

RECREATION RESOURCES

Recreational use in the WSA is generally light. Most recreation in CAMA involves use of guides, outfitters or tour busses along the Dalton Highway. About 75% of all recreational use of the area occurs within 10 miles of the Dalton Highway, elsewhere use is widely dispersed. Recreational use of the area is limited due to its remoteness, lack of access, an unforgiving environment, and high cost. The Dalton Highway, the only road system to and through CAMA, is not open to the general public north of the Brooks Range. Recreation opportunities are largely of a primitive nature except along the Dalton Highway where some facilities are available. Recreational activities include fishing, hunting, sightseeing, hiking, camping and floating the major rivers.

No recent statistics concerning recreational use of the area are available. A 1978 recreation survey was conducted for BLM (Duncombe 1978) which projected future use, but most of this use was derived by using Dalton Highway (Haul Road) vehicle survey counts. Projections of visitor use of the WSA lands based upon the number of vehicles using the Dalton Highway and "casual" observation of use elsewhere in the WSA are the best available at this time. Based on this information visitor use within CAMA (i.e. federal and nonfederal lands) is estimated at 2,500 visitor days per year (12 visitor hours equal 1 visitor day), with about 2,000 visitor days of this use occurring on CAMA WSA lands.

Most of the 2,000 annual estimated visitor days are attributed to sightseeing between May and September from tour busses along the Dalton Highway (approximately 1,000 visitor use days). Archery and rifle sport hunting from August through November account for approximately 90% of the remaining recreational use. Generally, the type of big game species hunted are caribou, moose and grizzly bear in that order. Fishing, although the resources are available, is not a highly pursued activity and is usually incidental to hunting, hiking or floating rivers.

In recent years, one commercial guide service has been issued a special recreation-use permit for guiding on CAMA WSA lands and several air-taxi operators provide transportation for recreationists using WSA lands. Other guides and outfitters have expressed interest in the area and issuance of additional recreation permits are expected.

There are no designated or established vehicular access points onto the CAMA WSA lands from the Dalton Highway. Travel by flying, hiking, snowmobiling (with adequate snow cover), and horseback riding are the approved means of transportation (without permit) within the area. Access for recreational use of CAMA WSA lands outside the Utility Corridor is almost entirely by aircraft. Ridge tops and river gravel bars are the main locations for landing aircraft. Motorboats are used at times, generally in conjunction with hunting trips and are of the inflatable type (they can be deflated for air transport) using small motors for propulsion.

WATER RESOURCES

Most of the many perennial streams flowing across WSA lands originate in the Brooks Range or its northern foothills. The entire watershed of the WSA eventually drains into the Arctic Ocean. Numerous fresh water lakes dot the northern Arctic Coastal Plain, although most of these lakes lie north of WSA lands.

Watershed Conditions

Watershed conditions within CAMA are good to excellent. Erosion is not a problem except where man has disturbed the vegetation cover or altered stream channel morphology. This situation usually occurs only along roads and trails or at construction sites and mining operations. These activities to date have been primarily outside of the WSA or are within the nonwilderness assessment area along the Dalton Highway.

Most stream banks are relatively stable, but, naturally occurring accelerated bank erosion can be observed during periods of high runoff. Where stream banks are composed of ice-rich materials (permafrost), such as are found in places on the Colville River, disturbance can result in ice thaws and massive changes as banks cave in and materials wash away.

Surface water quantity and quality varies with the season and climatic area. Maximum discharge generally occurs during spring breakup, usually during mid-June. Stream discharge rates peak during snow melt and summer rains. The presence of permafrost decreases infiltration, increasing runoff peaks but reducing base flow rates. Seasonal snow pack is the most important annual water storage component in the hydrologic cycle. River icings (aufeis) also store considerable quantities of water.

Water quality is generally good except during high water events and downstream from construction projects. Total dissolved solids and turbidity vary considerably with flows. Chemical quality tends to be better during the summer when flows are higher and impurities are diluted. Smaller streams usually have better water quality than larger rivers.

Consumptive Water Use

On WSA lands, water use is unknown but is probably minimal due to the small number of users.

Ground Water

Ground water resources are rare due to continuous permafrost. Permafrost restricts recharge, discharge, and movement, and confines water under artesian pressure. Frequently, ground water in the study area contains minerals which give the water an undesirable taste or smell. Overall, ground water resources are almost unused.

WILDLIFE RESOURCES

Terrestrial Animals

The CAMA WSA supports four important big game species: caribou, moose, grizzly bear, and Dall's sheep, see Figure 3.5.

Caribou (Rangifer tarandus)

Caribou that seasonally inhabit at least some CAMA WSA lands are divided into 3 herds: the Western Arctic Herd, the Porcupine Herd, and the Central Arctic Herd. Although caribou is an important source of red meat for subsistence and sport hunters, harvest numbers that occur on WSA lands are unknown.

Western Arctic Herd

This herd consists of approximately 230,000 animals. The traditional calving area of these caribou lies outside of WSA lands to the west (on National Petroleum Reserve-Alaska lands), but postcalving caribou will disperse eastward onto WSA lands along the Colville River and toward the Sagavanirktok River. Drainages of the Itkillik, Anaktuvuk, Chandler, and Killik Rivers have been major fall migration routes to winter range.

Porcupine Herd

This herd consists of approximately 180,000 animals. The Porcupine Herd inhabits Northeast Alaska plus portions of northwest Canada. Summer movements extend westward toward the Sagavanirktok River (Duquette, 1984). This herd primarily inhabits only WSA lands east of the Utility Corridor.

Central Arctic Herd

This herd consists of approximately 13,000 animals. The herd generally remains within CAMA, between the Colville and Canning Rivers. The Trans-Alaska Pipeline bisects the herd's area of use. The major calving area is located north of Franklin Bluffs with the calving season running from May 15 to June 20. Spring migration begins in March and continues into August, when the caribou turn south toward their winter range (Cameron and Whitten 1979).

Moose (Alces alces)

Moose are widespread, yet sparse, throughout WSA and adjacent lands. The estimated moose population for the Colville River drainage has increased from 1,223 animals in 1970 to 1,418 animals in 1984, this represents 61 percent of the total population on the North Slope.

Moose inhabit nearly all areas except high, steep, rocky slopes. Lowland bog habitat is important summer range because all known major calving concentrations in Alaska occur in this habitat type. Calving occurs during the first half of June. Moose concentrate in riparian habitat along the rivers during late winter. The highest known wintering densities within CAMA occur along the central Colville River and its tributaries from the Itkillik to the Oolamnagavik Rivers.

Dall's Sheep (Ovis dalli)

Dall's sheep inhabit the Brooks Range and adjacent foothills. A BLM survey conducted in 1981 accounted for a minimum population of 150 animals on the CAMA WSA and adjacent lands (Silva 1982).

Most of the Dall's sheep habitat is within either the Gates of the Arctic National Park or the Arctic National Wildlife Refuge. Silva identified the following areas as having sheep habitat within CAMA: Slope, Fortress, Castle and Notch Mountains; Tuktu Bluff; Hat Box Mesa; and Buteo Ridge. Of these areas, only Slope mountain is within the WSA. Mountainous areas within the Utility Corridor adjacent to conservation system units also possess sheep habitat. The extent of movements and migration routes into and out of CAMA WSA lands are not presently known.

A total of five lambing areas have been identified on CAMA WSA lands (Daum 1982, Hemming and Morehouse 1976). These areas provide important shelter for seclusion, resting, and escape. The lambing season extends from May 14 to June 10. A total of nine mineral licks have also been identified on WSA lands (Daum 1982, Finkler 1979).

Grizzly Bears (Ursus arctos)

Grizzly bears can be found throughout CAMA. The Brooks Range presently has an estimated minimum population of 2,200 to 2,700 grizzly bears, which appears to be increasing (ADF&G 1981 - 1986). Grizzly bears are not heavily hunted on WSA lands or anywhere within CAMA.

Grizzly bears inhabit alpine and subalpine areas and occasionally lowland areas. Bears in the region concentrate on hillsides with high berry production or on river drainages which contain moose and caribou.

Fisheries Resources

Habitats known to contain important fishery values on CAMA WSA lands include the following: lakes in the vicinity of Toolik Lake; the Kuparuk River; Sagavanirktok River and its tributaries; Ivishak River; Itkillik River; Anaktuvuk River and certain tributaries; Chandler River and certain tributaries; and the Colville River.

Subsistence fishing occurs at scattered locations in or near CAMA WSA lands; however, subsistence fishing on BLM lands is rare. A subsistence fishery exists in the Colville River by residents of Nuiqsut as far upstream as Ocean Point (Silva, 1986) which lies within State of Alaska selected lands. A commercial fishery exists in the Colville River delta area north of WSA lands.

Sport fishing occurs primarily along or close to the Dalton Highway. The lakes in the vicinity of Toolik Lake and the upper Kuparuk and Sagavanirktok Rivers are the most frequently fished. Grayling is the principle species harvested in this area. Lake trout and Arctic char are taken from lakes and streams within the WSA. Fishing pressure is characterized as being very light (Bendock and Burr 1985).

Threatened and Endangered Wildlife

The arctic peregrine falcon (*Falco peregrinus tundrius*), classified as "threatened," inhabits lands within CAMA, especially those WSA lands along the Colville River, see Figure 3.6. The historic breeding population of peregrine falcons along the Colville River was about 100 pairs, but is currently about 30 pairs (Cade 1960, BLM survey data). At least eight additional pairs nest along the Sagavanirktok River.

Waterfowl, shorebirds, and songbirds are major prey species for peregrine falcons. Therefore, all wetland and riparian habitats that support these prey species are also important. Critical habitat has not been officially designated for peregrine falcons. No other known existing wildlife species within CAMA are classified as threatened or endangered.

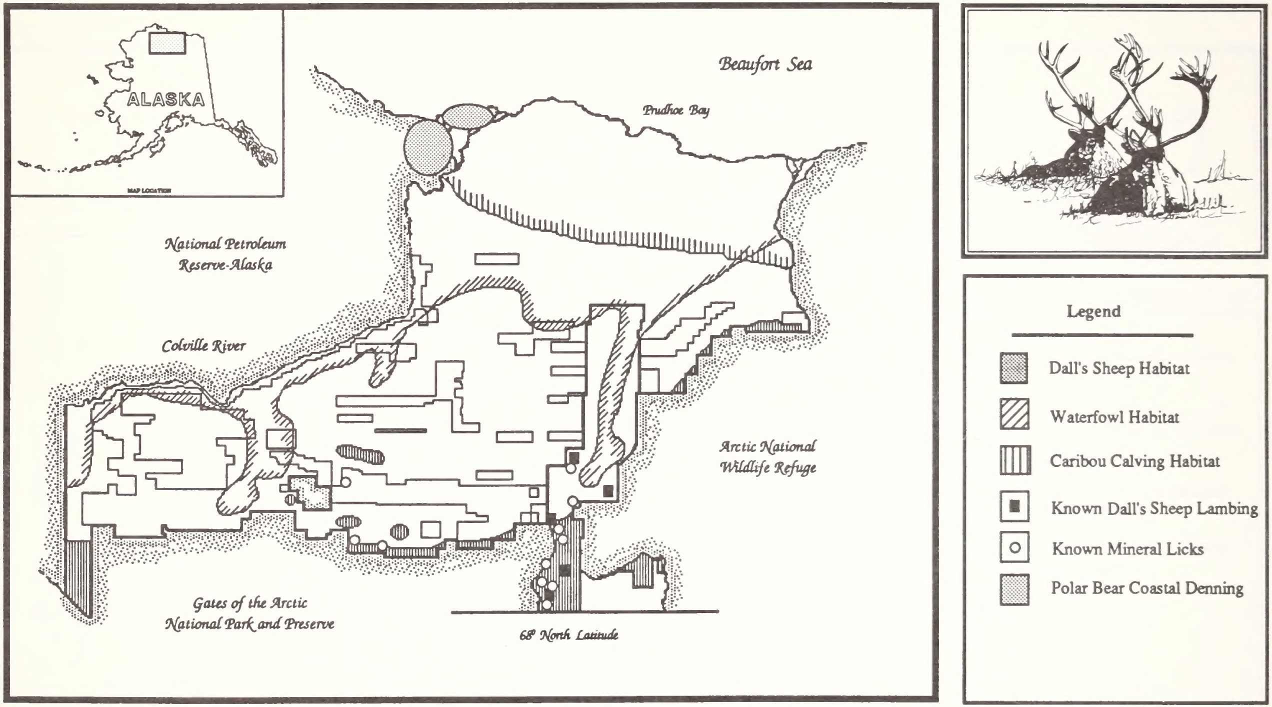

ALASKA
MAP LOCATION
Beaufort Sea
Prudhoe Bay
National Petroleum Reserve-Alaska
Colville River
Arctic National Wildlife Refuge
Gates of the Arctic National Park and Preserve
68° North Latitude
Legend
▩ Dall's Sheep Habitat
▨ Waterfowl Habitat
▥ Caribou Calving Habitat
■ Known Dall's Sheep Lambing
○ Known Mineral Licks
▩ Polar Bear Coastal Denning

Figure 3.5 Central Arctic Management Area Waterfowl, Dall's Sheep and Caribou Calving Habitat

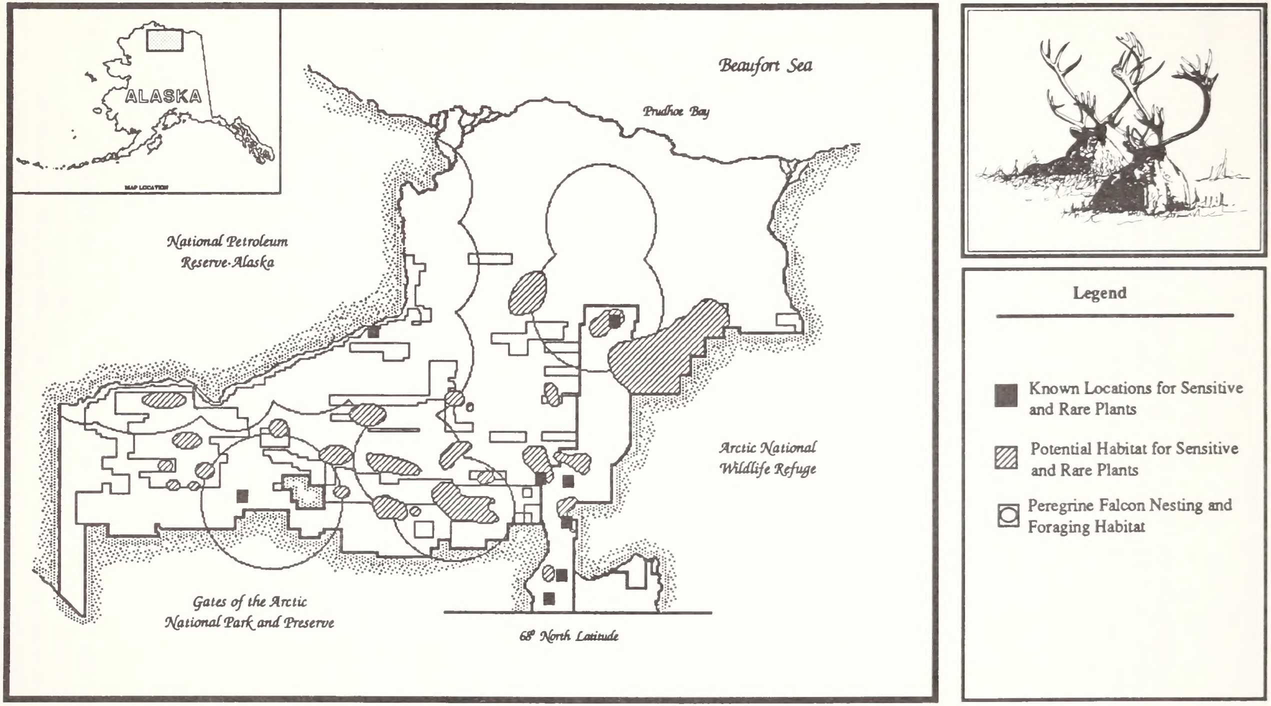

ALASKA
MAP LOCATION
Beaufort Sea
Prudhoe Bay
National Petroleum Reserve-Alaska
Arctic National Wildlife Refuge
Gates of the Arctic National Park and Preserve
68° North Latitude
Legend
■ Known Locations for Sensitive and Rare Plants
▨ Potential Habitat for Sensitive and Rare Plants
○ Peregrine Falcon Nesting and Foraging Habitat

Figure 3.6 Central Arctic Management Area Threatened and Endangered Animals and Plant Habitat

LANDS AND REALTY

Ownership

Land ownership within CAMA is a dynamic patchwork of federal, state and private holdings, see Figure 3.7. All lands within CAMA are part of the North Slope Borough. Most private land within CAMA is owned by the State of Alaska or the Arctic Slope Regional Corporation (ASRC). The federal lands, which comprise the CAMA WSA lands, are scattered throughout CAMA. The subsurface mineral estate of some of the WSA lands (approximately 274,000 acres) has been conveyed to ASRC. A large portion of WSA lands has also been selected for conveyance to the State and/or ASRC.

Table 3.3 **Land Status Within CAMA**

Status	Acreage
Federal Lands (CAMA WSA)	3,680,000
State selected & ANILCA 906(e) top-filed lands	1,500,000*
Native selected	970,000*
Split-estate lands(surface management only)	274,000
Nonwilderness assessment lands	316,000
Other federal lands	1,062,000
State Lands (TA'd or patented)	7,000,000
Private Lands (fee estate IC'd or patented under ANCSA)	2,170,000
TOTAL	12,850,000

* Includes 442,000 acres of land selected by both the State of Alaska and ASRC.

Land ownership adjacent to CAMA is largely consolidated. Adjacent landowners and managers include Native regional and village corporations, the State of Alaska and Federal agencies, including the National Park Service, U.S. Fish and Wildlife Service, and BLM. Human uses occurring on adjacent lands mainly involves oil and gas exploration and development, subsistence, and primitive recreation activities. Table 3.3 summarizes land status within the CAMA WSA.

Land withdrawals

Most unselected federal lands within the CAMA outside areas designated by PLO 5150 (the Utility Corridor) and PLO 5182 are open for selection by the State of Alaska but closed to all other forms of appropriation under public land laws. WSA lands presently closed to selection are lands within the Utility Corridor and lands within the Nigu/Etivluk area.

Access/Rights-of-Way

Presently access on and along the Dalton Highway through CAMA is restricted by the State of Alaska. The highway is closed to the general traveling public and off-road vehicles (ORVs) are prohibited on lands five miles either side of the highway except to access mining claims.or in conjunction with oil and gas exploration/development (Alaska Statute 19.40.210). The State of

Alaska maintains public airports at Chandalar Camp and Galbraith Lake, both within the nonwilderness assessment area. These airports are accessible from the Dalton Highway.

There may be highway rights-of-way within and adjacent to CAMA WSA lands which were granted under the authority of Reserved Statute-2477 (RS-2477). However, no claims of any RS-2477 rights-of-way occurring within or adjacent to CAMA WSA lands have been formally asserted. WSA lands are subject to valid existing rights, including bona-fide rights-of-way established under the authority of RS-2477.

There are three federally-designated corridors existing on CAMA WSA lands to accommodate rights-of-way. Two of these, PLO 5150 (the Alaska Utility Corridor) and PLO 5182 (the Gas-Arctic Corridor) consist of an "inner" and "outer" corridor, the distinction being that the inner corridor is closed to mining. The Utility Corridor is reserved for utility and transportation purposes and presently contains the Dalton Highway, the Trans-Alaska Pipeline System oil pipeline (TAPS), and two proposed gas pipeline projects. A third right-of-way corridor was established on WSA lands by Section 1431 (j) of ANILCA to provide Arctic Slope Regional Corporation (ASRC) surface access for transportation facilities, including pipelines, across public lands from the Kurupa Lake and Killik River areas east to the Utility Corridor.

SOCIOECONOMIC RESOURCES

The CAMA lands are located in the North Slope Borough, Alaska. The Borough in 1980 was 77% Native American. This population, isolated by distance and lack of surface access from other parts of Alaska, remains primarily dependent, both culturally and economically, on subsistence hunting and fishing.

Demographics

Census figures for 1985 show a North Slope Borough population of 6,860. Actual residential population is figured at 59% of this total, with 41% of the population assigned to development areas with a rotating population (such as Prudhoe Bay, the Department of Transportation site at Sag River, and Alyeska Pump Stations One through Four).

Villages within the North Slope Borough and near CAMA, but not within it, are Anaktuvuk Pass, Kaktovik, Nuiqsut and Barrow. These villages have a combined 1985 population of 3,905.

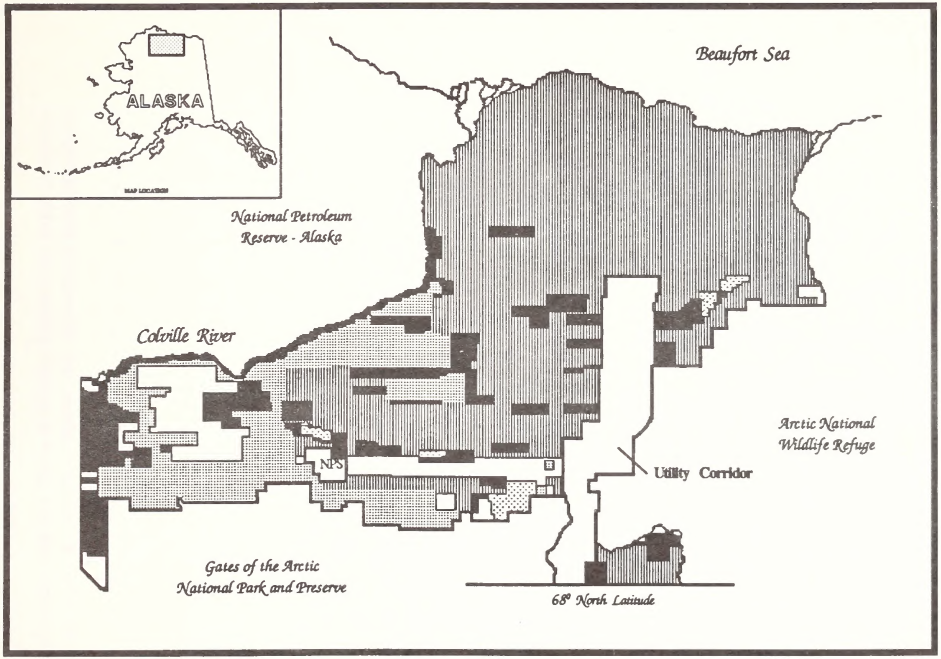
Employment

The North Slope Borough economy is dominated by an oil production industrial base. The Prudhoe Bay oil field, which lies within CAMA, is the major underpinning of the borough economy. By 1985, 45% of the 9,234 workers employed in the borough were concentrated in energy minerals, followed by 15% in local government, 14% in construction, and 12% in services.

Economic-related activities on CAMA WSA lands include very minor mineral (seismic) exploration, recreation, subsistence and Federal government resource management activities.

There were 19 mining claims listed on WSA lands in January of 1987 (there were 13 remaining claims in May of 1988), which require a $100 annual expenditure per claim for labor and improvements, probably very little of which is spent in the local economy (possible $2,850 for NSB development permits). Most of these claims are for placer gold, although it is unlikely that any of these claims have ever been worked. Because of the low locatable mineral potential and the current closure of WSA lands to oil and gas leasing, there have been very few economic contributions from these resources on WSA lands to the local economy.

Motorized and nonmotorized recreational use of WSA lands and related local expenditures are low and are considered insignificant to both the local economy and individual businesses. The


ALASKA
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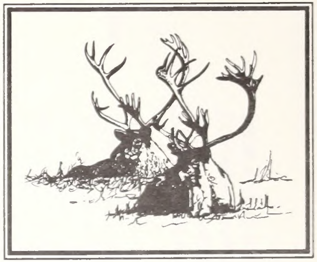
National Petroleum Reserve - Alaska
Colville River
NPS
Utility Corridor
Arctic National Wildlife Refuge
Gates of the Arctic National Park and Preserve
68° North Latitude



CAMA Land Status

Land Category	Acres
CAMA WSA	3,680,000
State Owned Lands	7,000,000
Private Lands	2,170,000

CAMA WSA LANDS

- ☐ Unselected BLM Lands
- ■ Selected Lands
- ░ BLM Surface Management

NONFEDERAL LANDS

- ▥ State Owned Lands
- ▦ Native Owned Lands

Figure 3.7 Central Arctic Management Area Land Status

actual amount of income generated locally from recreation use on WSA lands is unknown. Recreation use of WSA lands is estimated at about 2,000 visitor days a year. Only a very small portion of expenditures for recreation use of the WSA lands contribute to the local economy of the North Slope Borough.

Personal Income

Between 1970 and 1977 median Native household income increased 60% from $6,923 to $17,347 (Wickersham and Flavin 1983, 348). Median income for all households was $31,378 in 1979 (U.S. Census Bureau 1983, 170) but 12% of all Borough households received some public assistance income.

The socioeconomic characteristics of the resource area and affected communities are further described in the Draft Utility Corridor Resource Management Plan and Environmental Impact Statement (1987) , Chapter 3, pages 3-29 through 3-34.

SUBSISTENCE USE PATTERNS

As North Slope villagers are predominantly subsistence users, subsistence can also be declared an economic benefit. Subsistence use of wild, renewable resources is a valued and traditional way of life and an economic necessity to many rural Alaskans living in or near CAMA. Some portions of CAMA WSA lands provide subsistence opportunities for the villages of Anaktuvuk Pass, Nuiqsut, Kaktovik and Nolan/Wiseman, see Figure 3.8. However, the exact areas used and the amount of use each area receives vary yearly due to fluctuations in resource availability. As a result, the percentage of subsistence usage of WSA lands compared to other areas fluctuates yearly and has been documented only in general terms, indicated below:

Anaktuvuk Pass

The people of Anaktuvuk Pass are recorded to use an extensive amount of northern Alaska in pursuit of their subsistence activities. These use areas include portions of the Gates of the Arctic National Park and Preserve to the south and west; extend to the Colville River in the north, and across to the Utility Corridor on the east (Pedersen, 1979). Use of CAMA WSA lands involves subsistence-related activities, generally on river and stream drainages where trapping, hunting caribou and moose, and fishing typically occur (NSB October 1977).

CAMA contains several documented subsistence use sites and receives generalized, sporadic travel by Anaktuvuk Pass hunters searching primarily for caribou or moose. Among the specific sites are the following:

1) Pingaluligit Mountain - about 20 miles south of the Killik Bend of the Colville River; noted for hunting caribou, moose, marmots, and for camping (North Slope Borough October 1977, Anaktuvuk Pass Traditional Land Use Site, 76). This site is on CAMA WSA lands.

2) Qiruktagiaq - a hunting area near Horseshoe Mountain, north of the isolated portion of the Gates of the Arctic National Park and Preserve (Ibid., site 46). A portion of this area could be on WSA lands.

3) Ayiyak River area - a hunting area about 30 miles south of Umiat. Again, portions of this area could be on WSA lands, as the land ownership is interspersed.

4) Aninagnauraq and Quunnut - two localities near the Anaktuvuk River and Banded Mountain; noted for fishing, fox trapping, hunting, camping, and salmonberry picking.

5) Irgnyivik Lake - about 25 miles northwest of Anaktuvuk Pass; noted as a caribou hunting area (Ibid., sites 15). This area is located on either state or ASRC lands.

6) Nanushuk Lake and Nanushuk River - about 35 miles northeast of Anaktuvuk Pass; noted as areas of fishing and wolf trapping (Ibid., site 23; Inupiat of the Arctic Slope et al., 1974-75). Most of the lands in this area are WSA lands.

7) Itkillik River sites - east of Galbraith Lake; noted for fishing, hunting, trapping, and camping (North Slope Borough Oct. 1977, Anaktuvuk Pass Traditional Land Use Site 104, 108). Most of the lands in this area are WSA lands.

Nuiqsut

Residents of Nuiqsut utilize portions of the CAMA WSA extending up the eastern side of the Colville River from below its confluence with the Anaktuvuk River northward to the Beaufort Sea (Pedersen 1979:10). Documented uses include: trapping, collecting of fuel, berries, roots, and seeds; and hunting for caribou, moose, and waterfowl. These lands, however, represent only a small portion of the total subsistence use area for Nuiqsut.

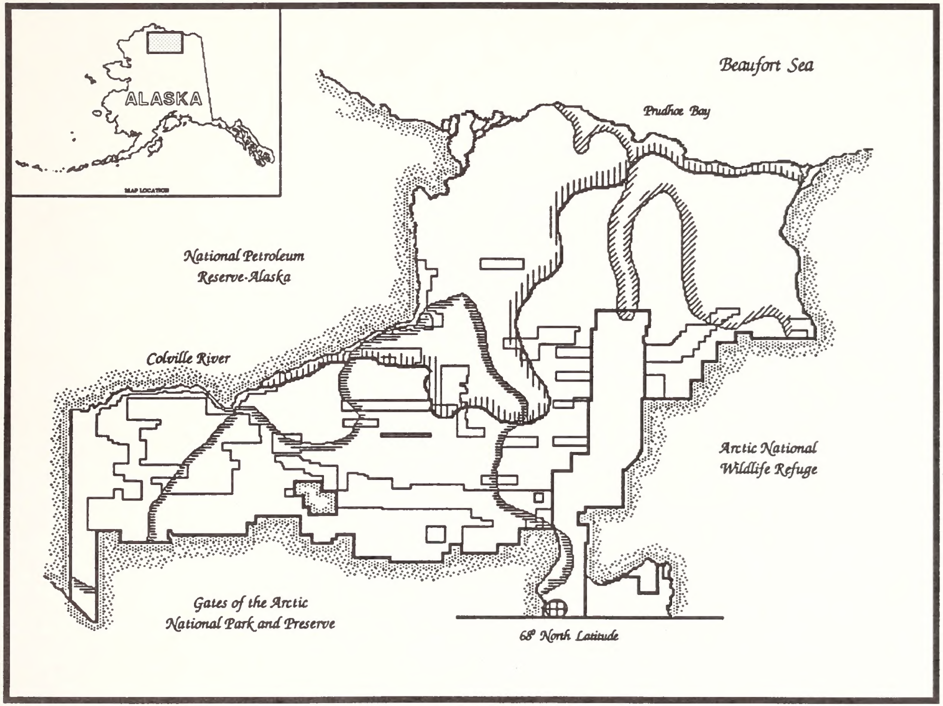
Kaktovik

The WSA lands are quite detached from the village of Kaktovik; however, historically villagers have travelled as far as the Utility Corridor to pursue subsistence activities. Most of the land used today, however, occurs on the eastern side of the Canning River. In the early 1970s, one fishing and camping area was recorded near or on CAMA lands along the Canning River in the area of Ikiakpaurak Valley (Inupiat of the Arctic Slope et al. 1974-75).

Some use of WSA lands involving fishing along the Ivishak River on the eastern portion of CAMA, about 25 miles northeast of Happy Valley, was also indicated in the North Slope Borough's March 1977 Traditional Land Use Inventory for the Beaufort Sea. Similarly, subsistence fishing was noted in the same document for an area on the Sagavanirktok River, about 15 miles down river from Happy Valley. Such uses are rare today or may not occur at all.

Nolan/Wiseman

The residents of Nolan/Wiseman utilize only a small portion of WSA lands; most use is concentrated south of CAMA. Use that occurs on WSA lands is mostly within the nonwilderness assessment area.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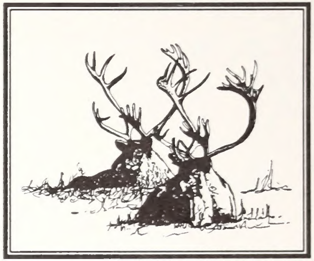
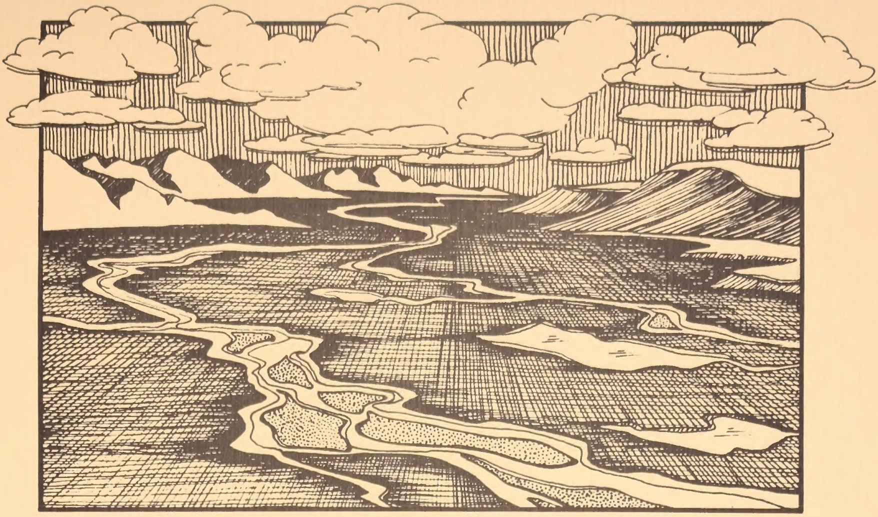


Legend

- ▤ **Anaktuvuk Pass Use Area** (Pedersen, 1979; Nelson et al, 1982)
- ▥ **Nuiqsut Use Area** (Pedersen and Shishido, 1986; Pedersen 1979)
- ▨ **Kaktovik** (Pedersen et al, 1985)
- ▦ **Nolan/Wiseman/Coldfoot Use Area** (BLM, 1986)

Note on Map Sources and Accuracy: See bibliography for complete references to sources used in constructing this map. Data for most of the communities came from the Alaska Department of Fish and Game, Subsistence Division, which qualifies such maps by stating: 1) Subsistence use areas depicted are based on information obtained from a sample of community households; 2) Subsistence patterns of household resource use may change from year to year while data are collected for specific periods; 3) Therefore, all maps can be considered potentially only a partial representation of areas important to local village residents.

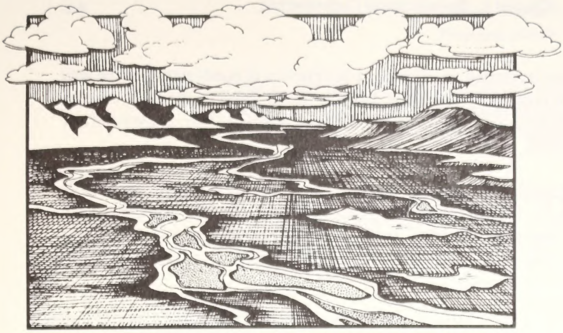
Figure 3.8 Central Arctic Management Area Subsistence Use Areas



Chapter 4

Environmental Consequences

Introduction 4-1
Proposed Action Impact Analysis 4-2
No Wilderness/No Action Alternative Impact Analysis 4-11
All Wilderness Alternative Impact Analysis 4-13
Partial Wilderness Alternative Impact Analysis 4-17
Oolamnagavik-Etivluk Alternative Impact Analysis 4-24



CHAPTER 4

ENVIRONMENTAL CONSEQUENCES

INTRODUCTION

Preface

This section describes the environmental consequences of implementing the different wilderness alternatives. The discussion focuses primarily on the elements and environmental issues identified during the scoping process. The "Scoping" section in Chapter 1 contains a listing of impact topics selected for analysis.

Analysis Criteria

The following assumptions and guidelines were used in the impact analyses for each of the five wilderness alternatives:

1. BLM will have sufficient funding and work force to implement the management option as described.

2. Future users of the WSA would meet requirements for all applicable federal, state, and local permits.

3. Designation of an area as wilderness would not result in impacts due to direct disturbance of resources. Any direct disturbance of resources under wilderness designation would result from use of prior rights that must be recognized by BLM. Such disturbance could occur with or without wilderness designation.

4. Impacts of wilderness designation would result from (1) protection of certain resources; (2) denial of the opportunity to develop certain resources; or (3) restrictions placed on or changes in allowable management practices and land uses.

5. In all alternatives, for purposes of impact analysis, management of areas not recommended for wilderness designation will assume land uses which are consistent with the Arctic District's Utility Corridor Resource Management Plan. Also, analysis of impacts is based on the anticipated activities described in Chapter 2 and summarized in Table 2.5.

6. Where BLM does not retain the subsurface estate but does retain the surface estate, federal mining and leasing authorities do not apply. However, because subsurface interests have not been retained, mineral exploration and development activities will not be prohibited. BLM will be responsible for mitigating surface impacts on these lands.

7. Once designated, management of an area as wilderness would be in accordance with the Wilderness Management Policy (U.S. Department of Interior, BLM, September, 1981), the Wilderness Act of 1964 and the provisions of ANILCA.

8. Until a congressional decision is reached on wilderness designation or nondesignation the area will continue to be managed to protect its wilderness character as required by the BLM *Interim Management Policy and Guidelines for Lands Under Wilderness Review* (U.S. Department of The Interior, BLM, January 1979).

9. All discretionary actions including all permits issued by BLM will be evaluated as to their effects on subsistence uses under requirements of Section 810 of ANILCA. Also, Sec. 810 requirements for subsistence evaluations will be followed as appropriate for any subsequent environmental analysis or planning efforts, such as those that may involve oil and gas, recreation, mining, or other potential land use proposals.

PROPOSED ACTION IMPACT ANALYSIS

41,000 Acres Recommended for Wilderness Designation

3,639,000 Acres of Nonwilderness

IMPACTS ON WILDERNESS VALUES

Naturalness, solitude and the opportunity for primitive and unconfined recreation would be preserved and available for future generations in the 41,000 acre Nigu block. The annual 40 visitor use days (VUDs) would continue with only minor disturbance due to aircraft use.

On the 3,639,000 acres of WSA lands not recommended for wilderness, motorized use could have long-term impacts on naturalness. However, due to the area's remoteness, existing legal restrictions on ORV use, and the lack of resident population, ORV activity is expected to be light and widely dispersed. Therefore, motorized use would be expected to have only short-term impacts on naturalness and solitude. These short-term impacts would result from recreational use of airplanes (generally by sport hunters and hikers) for access to WSA lands and ORV use (mostly unauthorized use of snowmachines) from the Dalton Highway during the months of September through November. Use of snowmachines for subsistence purposes and general access by area residents would also account for temporary disturbance, usually during winter months.

Mineral development (placer gold mining) would cause approximately 250 acres of direct surface disturbance and would further impact the perception of naturalness, solitude and scenic values of approximately 23,000 acres of adjacent land.

Geological and geophysical (seismic) exploration activities would cause no long term impacts to wilderness values. Short-term and localized loss of naturalness due to "green trails" would occur. These green trails would be visible from the air for 2 to 3 years but difficult to detect from the ground. Solitude and scenic values would be impacted only during the actual period of seismic operations. Since no recreational use occurs during the time seismic operations are being conducted, these intrusions would not be noticed.

Exploratory drilling would cause surface disturbance and thus loss of naturalness to approximately 300 acres of land over a 30 year period. No impacts would occur to the perception of naturalness, solitude, nor opportunity for primitive and unconfined recreation since no recreational users would be present at the time of drilling.

It is anticipated that oil production and development would cause surface disturbance and direct loss of naturalness to approximately 11,180 acres of WSA lands and 3,400 acres to state and private (ASRC) lands. This would have an effect on the perception of naturalness, solitude and scenic qualities on approximately 1,100,000 acres of WSA lands and 527,000 acres of State and ASRC lands.

Conclusion: Wilderness values would be preserved on 41,000 acres. Geophysical exploration, exploratory drilling, energy mineral production and development, placer mining, and use of airplanes and ORVs for recreational access would degrade wilderness values on areas not designated as wilderness.

IMPACTS ON OIL AND GAS DEVELOPMENT

As a result of wilderness management all lands within the 41,000 acre Nigu Block would be withdrawn from oil and gas leasing. There are no oil and gas leases currently existing on these lands. Exploration and development of energy resources on lands within the Nigu Block would be foregone. However, all lands within the Nigu Block have been rated as having low potential for oil and gas resources.

Of the remaining 3,639,000 acres of the CAMA WSA recommended nonsuitable, 3,365,000 would be open to federal oil and gas leasing and an additional 274,000 acres of split-estate land (subsurface is owned by ASRC) would presumably be available to oil and gas development through ASRC. Hence it is expected that all CAMA WSA lands outside the proposed wilderness area would be available for oil and gas development.

Of the 3,639,000 acres of WSA lands available to oil and gas development, approximately 3,330,000 acres are rated as having high potential and 309,000 acres are rated as having low potential for oil and gas occurrence. All lands of high potential would be open to oil and gas development under the Proposed Action. Actual development of these potential WSA resources however, is only moderately feasible and generally thought to be dependent on major discoveries on adjacent lands within the National Petroleum Reserve-Alaska or on economic discoveries made within CAMA (on state or private lands).

Conclusion: Since, the potential for oil and gas occurrence in the proposed wilderness area is low and all WSA lands of high potential would be open to development, there would be no impacts to potential oil and gas development as result of wilderness management.

IMPACTS ON OIL AND GAS TRANSPORTATION ROUTES

Barring special legislative action, the 41,000 acres of WSA lands recommended for wilderness designation under the Proposed Action would be closed to oil and gas transportation systems. This recommended wilderness area is a mountainous region bordered on the south and east by National Park Service land and on the west by the National Petroleum Reserve-Alaska (NPR-A). Any future oil and gas transportation system in the vicinity of this wilderness area would likely link a development field (not now in existence) in the NPR-A with the Trans-Alaska Pipeline (TAPS) to the east. Lands to the north of the wilderness area would be open to oil and gas transportation systems and present more suitable terrain for such purposes. Given the area's terrain, its location relative to the Brooks Range, NPR-A, and National Park Service land, it is not likely that any pipeline or other oil and gas related transportation system would need to be routed across this block of land.

All other lands within the 3,639,000 acres of the WSA would remain open to placement of transportation systems. WSA lands would likely be used for transportation systems to support economical oil and gas development in NPR-A. Transportation systems needed for development in NPR-A would be routed west-east to the existing TAPS. Based on oil and gas transportation and development scenarios for CAMA WSA lands (see Chapter 2), pipelines needed for future transportation systems would cross approximately 175 miles of WSA lands.

Conclusion: There would be no adverse impacts to oil and gas transportation systems as a result of this alternative.

IMPACTS ON LOCATABLE MINERAL DEVELOPMENT

As a result of the Proposed Action, 41,000 acres of lands within the Upper Nigu River area would remain closed to exploration and development of locatable (hard rock) minerals. This area includes 39,000 acres of land with moderate potential for hard rock minerals (primarily lead-zinc and related minerals). The probability for actual development of these undiscovered but potentially occurring hardrock minerals is unlikely due to the area's remoteness, lack of access and the availability of substantial lead-zinc deposits elsewhere in the state (e.g. at Red Dog and LIK Properties in western Alaska). There are no existing claims in the area.

Of the remaining 3,639,000 acres of CAMA WSA lands, it is expected that in the future all would be open to hardrock mineral development. Of these lands, approximately 3,342,000 acres are considered to have low potential, approximately 297,000 acres have a moderate potential and no lands are considered to have a high potential for hardrock mineral occurrence.

The only likely development within the CAMA WSA would be of a placer gold deposit within approximately 275,000 acres of moderate potential land in the Brooks Range in and near the Utility Corridor south of Toolik Lake. Although the probability of finding a developable gold deposit is low, it is possible that given the access provided by the Dalton Highway and the relatively small size of operation required that a developable deposit would be located. None of these lands would be closed to development as a result of wilderness management.

Conclusion: Since, the probability for development in the proposed wilderness area is low, there would be no impacts to potential mineral development as result of wilderness management. One placer gold mining operation would be anticipated on nondesignated lands.

IMPACTS ON BIG GAME WILDLIFE AND HABITAT

Wilderness designation of 41,000 acres (Nigu Block) would protect the wildlife species within the area, especially caribou, grizzly bear and Dall's sheep. By designating this area wilderness, the lands would remain undisturbed, eliminating the possibility of habitats being altered through mineral and oil and gas exploration and development. However, due to the remoteness of the Nigu Block, lack of existing infrastructure, lack of discovery and presence elsewhere of minerals potentially occurring within this area, exploration or development of the Nigu Block was not anticipated.

Allowances by Section 811 and 1110 of ANILCA concerning uses of ORVs in a designated area, should have minimal effect on wildlife populations within the Nigu Block. This use is currently occurring and is presently not having any detrimental effects on either habitat or wildlife populations. ORV use is light, 25 visitor days per year, and is not expected to increase appreciably in the future. Therefore, even though ORVs are allowed within the designated area, impacts to wildlife are minor, and disturbance to habitat is insignificant.

On the remaining 3,639,000 acres not designated wilderness, wildlife populations and their habitats would be impacted by surface disturbing activities (roads, drilling and pipeline pads, airstrips etc.), traffic, human habitation and use, noise, and pollution (both air and water).

The placer gold mining operation anticipated to occur under this alternative would likely disturb approximately 250 acres of land as a result of the construction of buildings, stripping, processing, and tailings disposal during the life of the activity (30-40 years). Direct disturbance would be limited to five-ten acres each year with reclamation being conducted on an annual basis. However, reclamation efforts, which would recontour the land and revegetate the surface, would not completely restore the land to its natural state, consequently some loss of wildlife habitat would occur from any active mining operation. In addition, indirect disturbance to wildlife will occur on an additional 640 acres (1/2 mile radius from mine site) being affected by human activities (e.g. noise, aircraft, traffic, lights, smoke, etc.). These direct and indirect disturbances would disturb Dall's sheep and moose and their habitat. However, due to the limited acres of disturbance over the lifetime of the project, the detrimental impacts from this anticipated mining activity would be minimal based on the development assumptions discussed, and the overall habitat available to Dall's sheep and moose.

In analyzing impacts of oil and gas development and other human activities on wildlife populations and their habitats, it is impossible to give precise demographic or population change predictions of what might result from a broad range of potential development scenarios. The significance of effects on wildlife and their habitat would depend on many factors, including, but not limited to, exact location, duration, and the scheduling and extent of the development activities. In permitting development activities, the protection of crucial and limited habitat (e.g. riparian areas, mineral licks) is very important to maintaining healthy wildlife populations.

The greatest direct loss of wildlife habitat would result from oil and gas development and production facilities, roads, and pipelines. Production and development facilities would generally impact those WSA lands in the central and northern portion that lie within the areas of high potential for oil and gas occurrence. Direct disturbance to wildlife would be much greater on these lands because of the infrastructure needed for oil an gas facilities. The significance of effects on wildlife and their habitat would depend on the location of the development activities.

The primary effect on big game (e.g. caribou, moose, and grizzly bear) would be a direct loss of 2,420 acres of habitat for production facilities, roads, gravel pits, and 870 acres for pipelines (Table 2.2). In addition, an indirect loss of approximately 6,400 acres (1/2 mile radius from facilities) of habitat associated with disturbance from camp facilities (e.g. noise, lights, etc.), and the indirect loss of habitat along 174 miles of pipelines (approximately 55,000 acres, 1/4 mile either side) that is primarily associated with disturbance from vehicle traffic would occur. This would cause a disruption of the levels and distribution of resident and migratory populations within the immediate vicinity of the development facility or pipeline. In addition, east-west pipelines could potentially hinder migratory patterns of big game animals (particularly caribou) within CAMA. Animals that remain within the immediate development area or along the pipeline route (1-2 miles radius), may be lost to vehicle collisions, hunting/poaching, or could become a nuisance animal (e.g. bears) and have to be destroyed.

Under the Proposed Action, 3,680,000 acres of land within CAMA WSA would be open to oil and gas development activities. The direct loss of 3,290 acres (.0009%) and indirect loss of 61,400 acres (.017%) of land to wildlife populations and their habitats would be a minimal impact because of the overall size of the area and the location of the development activities in relationship to crucial wildlife habitat. Within CAMA, the riparian zones (crucial habitat for moose and grizzly bear) generally run in a north-south direction, while Dall's sheep crucial habitat (mineral licks, lambing areas) are generally located in the mountainous regions. The development facilities, roads, human habitation areas anticipated under this alternative would be located on non-crucial wildlife habitats. The proposed pipelines (east-west) would cross crucial habitats in a perpendicular manor and would have minimal impacts on the overall wildlife habitat available. However, if the development activities and/or pipelines change to other locations and the 3,290 acres of direct loss and 61,400 acres of indirect loss were to occur within wildlife crucial use areas (e.g. riparian zones, mineral lick areas, denning sites, etc.) the impact could become more significant due to the limited acres of crucial habitats. In addition, the potential disruption from east-west pipelines, roads, and associated human activities could hinder migratory patterns of big game animals (particularly caribou) within CAMA. Approximately 30,000 Caribou (12% of the Western Arctic Herd) migrate through the CAMA area each year and interaction with the proposed pipelines could be expected. Presently there is no way to identify exactly where a development field, pipelines, or other oil and gas activity would take place, consequently no precise estimate of impacts to wildlife crucial habitats can be made, outside of evaluating the proposed action scenario.

Under the Proposed Action 3,639,000 acres of land within WSA would be open to oil and gas related geophysical and exploratory activities. Geophysical operations within the CAMA area would be episodic in nature. It is predicted that these operations would be conducted over an average of approximately 500 miles of WSA lands each year. Geophysical operations would be authorized and conducted only during the winter months (November thru May) when conditions allow for ground vehicles to cross the tundra with minimal impact to the vegetative mat (12 inches of frozen ground and 6 inches of snow). In addition only vibroseis techniques would be used, which eliminates surface disturbance caused by explosives used in earlier operations (pre 1980). The effects of (vibroseis) geophysical activities on wildlife and vegetation would include: disturbance of animals present within the immediate area of the operation, green trails caused by the compaction of snow on the tundra, pollution (small fuel leaks from equipment), and occasional surface disturbance from blades or tracks of vehicles breaking through the snow layer.

Some disturbance would occur to the animals that are present in the immediate vicinity of any geophysical operation. However, because most wildlife on the Arctic Slope have either migrated out of the area (caribou, waterfowl, raptors) or are hibernating (bears, small mammals) during the winter months, this disturbance would be confined to a few species: caribou (some remain during the winter), moose, furbearers (wolves, fox, wolverine), and Dall's sheep. However, this disturbance is very temporary in nature (1-2 days in most locations), and most animals will move away from the area until the operation moves on and then return to their normal activities.

Disturbance of the vegetative mat would occasionally occur when the blade or tracks of vehicles break through the snow cover. In addition, for 1-2 years after an operation green trails could be present where the compacted snow provides additional moisture resulting in the vegetation growing slightly more vigorously than on surrounding areas. However, because BLM monitors these operations closely and allows operations to proceed only when the conditions provide adequate protection to the vegetative surface (12 inches of frozen ground and 6 inches of snow) these types of disturbance are short-term and sporadic in nature and do not cause any long-term effects to the vegetation cover.

It is projected that approximately 1 exploratory well (winter only) would be drilled annually beginning in about 10 years for a cumulative total of approximately 30 wells on WSA lands in the next 30 years. Disturbance would occur to the animals that are present in the immediate vicinity of any exploratory well operation. However, as previously explained, only a few species, caribou, moose and furbearers (wolves, fox, wolverine) are present within the area during winter months and exploratory drilling activities are localized. Exploratory drilling would result in 10 acres of direct habitat loss (e.g. gravel pads) with an additional 640 acres (1/2 mile radius from well) being indirectly affected by human activities (e.g. noise, lights, smoke, etc.). Because of the localized impact and timing of exploratory drilling, there would be only minor disruption of activity patterns of those animals within the immediate area. The animals that are present would move away from the activity zone during the operation.

Disturbance of the vegetative mat would also occur as a result of exploratory drilling operations. Approximately 10 acres of habitat would be lost with the construction of gravel pads for drilling operations and associated human activities for a total of 300 acres of disturbance over the period of exploratory drilling operations. The most recent drilling operation within the Arctic District was successful in using ice pad construction instead of gravel. This eliminated any permanent gravel pad remaining after the operation. If this method proves to be effective for future wells, then the direct loss of 10 acres of wildlife habitat per well would be eliminated. However, even if gravel pads are used for future exploratory wells, the disturbance would be localized and generally small, therefore it is not anticipated that exploratory wells would cause any long-term effect to the overall vegetation cover or wildlife populations within CAMA.

ORV use of the nondesignated lands is minimal and does not cause any appreciable impacts to wildlife populations or their habitats. ORV use is not expected to change as a result of the Proposed Action

Conclusion: There would be no additional impacts to wildlife populations or their habitats on the designated 41,000 acre Nigu Block. Impacts to wildlife habitat on the areas not designated as wilderness would occur. Approximately 3,800 acres of direct loss of habitat as well as 63,000 acres of indirect disturbance would occur on WSA lands. These impacts to wildlife populations and their habitats would be minimal because of the overall size of the area (3,680,000 acres of land within the CAMA WSA), and the location of the development activities (based on the Proposed Action) in relationship to crucial wildlife habitat.

IMPACTS ON RECREATIONAL OFF-ROAD VEHICLE (ORV) USE

Wilderness designation would close 41,000 acres of the WSA within the Nigu block to general recreational ORV use. Traditional use of aircraft, motorboats and snowmachines (during the winter) would be allowed. Access to the area is primarily by aircraft with about one-third of total visitation (an estimated 40 visitor use days) involving use of small motorboats (rafts with outboards). No other recreational use of ORVs is occurring in the Nigu block. Given its location and remoteness, no appreciable increase in use would be anticipated. Therefore, ORV use in the Nigu block would not be affected.by wilderness designation.

On the remaining 3,639,000 acres of WSA lands not designated as wilderness, current state and federal restrictions on ORV use would continue. At the present time all recreational ORV use is prohibited within five miles of the Dalton Highway by state law. Recreational use of ORVs outside this area is limited to recreational use of snowmachines with adequate snowcover. It is expected that state restrictions similar to those existing along the Dalton Highway would be placed on oil field access and pipeline roads if built. Currently, there is little or no recreational ORV use occurring except along the Dalton Highway (which is unauthorized due to the state closure). It is unknown how much the unauthorized ORV use would increase if the Dalton Highway is opened and development for oil and gas commences in central CAMA.

Conclusion: There would be no impact on ORV use on CAMA WSA lands as a result of the Proposed Action.

IMPACTS ON SUBSISTENCE USE PATTERNS

Under this alternative, up to 3,369,000 acres would be open to oil and gas development, hard rock mineral mining, ORV uses, and recreation. Thus, potential impacts to subsistence use patterns could occur but they are not judged likely to reach the level of causing a significant restriction to subsistence uses. Thus, proposed or hypothetical development in the area does not pose any foreseeable significant restriction in the numbers of animals available for harvest, or upon the distribution, migration, or location of those animals, nor is development foreseen to significantly impact human access to animals or any other resource used for subsistence purposes (Appendix C).

As discussed in Chapter 3, the village of Anaktuvuk Pass uses the most land within the WSA; about 7% of their traditional use area falls in the study area. WSA lands comprise less than 5% of traditional subsistence use areas for the villages of Nuiqsut, Kaktovik, and Nolan/Wiseman (Table 4.1). For the Proposed Action, 3,290 acres of habitat on nondesignated WSA lands would be disturbed, and 7,890 acres would be secondarily affected, causing a direct disturbance to wildlife. Moose, caribou, grizzly bear, and furbearers would be the animals most likely to be disturbed. The primary disturbance is expected to be of short term, although long term disturbance of caribou, particularly migration routes, could occur depending on the pipeline and road location and design. Localized population levels within the area of disturbance would probably be reduced, at least during periods of activity.

Hypothetical Pipeline Route B, discussed above, would pass through or near Anaktuvuk Pass traditional land use sites of Pingaluigit Mountain, Qiruktagiaq, Aninagnauraq and Quunnut, and the Itkillik River (see Chapter 3). Noting that this pipeline route is virtually a worst case scenario, such a route would most likely disturb or destroy the subsistence values of these sites. Except for the Itkillik River, the sites are hunting and trapping sites, and construction of a pipeline could permanently alter some or all of the habitat, and thus the presence of some or all of the animals. However, these sites represent a small portion of the overall subsistence use of the area, and, thus, their destruction would not cause a significant restriction to the subsistence uses and needs of Anaktuvuk Pass. None of the other villages using the WSA have specific traditional land use sites affected by the hypothetical pipeline routes.

Pipeline Route B, assumed to be above-ground for the purposes of this evaluation, could also potentially affect the migration north-south of caribou, according to the wildlife biologist's assessment (see above). Thus, there is a potential impact to subsistence use patterns if the migration route changes. (Note: this is a hypothetical worst case scenario). However, at the time such construction is planned, mitigation measures would be applied making an actual significant restriction to subsistence unlikely to happen. As information given in the wildlife section indicates, hypothetical pipeline routes A and C would be unlikely to cause a change in migration routes of caribou, nor would other associated impacts be likely to cause a significant restriction to subsistence uses.

Apart from the direct habitat disturbance, and thus potential animal population disruption, caused by potential oil and gas development, additional indirect disturbance would occur on 110,000 acres by oil field traffic, recreational users, a small amount of placer mining, and an increase in ORV use. Using the examples of the Prudhoe Bay oil field and the Dalton Highway, such disturbances would probably be intermittent and temporary, and not cause a permanent reduction in animal numbers or a permanent change in location or migration patterns.

In total, including indirect disturbance, approximately 0.1% of the total subsistence area of Anaktuvuk Pass, and 15.5% of the subsistence area within theWSA would be affected by the Proposed Action. Nuiqsut has about 0.1% of its total subsistence area, and about 4.3% of their area within WSA affected by this alternative. Neither Kaktovik nor Nolan/Wiseman has any portion of a subsistence area affected by energy development. However, Nolan/Wiseman would have 0.04% of their total, and 21% of their subsistence area within the WSA, affected if one placer mine were to be developed (Table 4.1).

Conclusion: There would be potential adverse effects on subsistence use patterns in the areas not designated as wilderness. Some of these impacts could be temporary, but some may be long-term. There is also a potential impact to subsistence use patterns if hypothetical pipeline route B is constructed; however, mitigation measures that would be determined and applied at such time would cause an actual significant restriction to subsistence to be unlikely. Furthermore, because of the small areas involved in the total subsistence land usage of the villages using the WSA, the proposed action would cause no significant restriction to subsistence uses or resources for any of the villages using the WSA lands for that purpose.

Table 4.1 Proposed Action Impacts on Subsistence Areas

VILLAGE	SUBSISTENCE AREA	HYPOTHETICAL OIL & GAS DEVELOPMENT				MINING
		Pipeline A	Pipeline B	Pipeline C	Indirect	
Anaktuvuk Pass	11,000,000 acres total subsistence area; 7% (760,300 acres) is in WSA.	.007% whole 0.1% WSA	.07% whole 1% WSA	.02% whole 0.4% WSA	.01% whole 14% WSA	None
Nuiqsut	7,488,000 acres total subsistence area; 3% (247,700 acres) is in WSA.	.01% whole 0.3% WSA	None	None	0.1% 4%	None
Kaktovik	9,000,000 acres total subsistence area; 1% (115,200 acres) is in WSA.	None	None	None	None	None
Nolan/ Wiseman	553,000 acres total subsistence area; .2% (1,150 acres) is in WSA.	None	None	None	None	.04% whole 21% of WSA

IMPACTS ON SOCIOECONOMIC RESOURCES

With increases in exploration additional employment could potentially reach 50 to 60 workers in a 3 year exploration phase. A development phase is possible, but is highly dependent on the price of oil and the quantities discovered. A development phase for one field and construction phase for one pipeline could employ between 1,500 to 2,000 workers for a period of 4 to 8 years. On-line operation could require 150 - 300 workers for 8 to 30 years.

Most of this employment would not directly affect local rural residents. In 1982 for example, a special census conducted by the Alaska Department of Labor found only 178 resident workers (native and non-native) out of 6,306 oil industry workers (Minerals Management Service, 1986). If this proportion of resident to nonresident hire holds for future development, it is anticipated that only 2.8% of new employment, or 65 to 88 jobs created under a development scenario would accrue to local rural resident workers.

The reasons for limited rural resident involvement in the oil related work force are:

1. Current oil production activities call for proportionally more specialized labor.

2. Much of the labor demand is met by unions with hiring halls in Fairbanks and Anchorage.

3. The number of people required is large enough to guarantee that rural resident workers will be a small minority of the labor force.

4. Existing work schedules provide for time off, but only according to a rigid pattern that does not fit well with Inupiat desires to mix wage employment with hunting, fishing, and village social activities (Kruse 1984). It is anticipated that employment opportunities within the villages will decline making oil industry employment more important. At the same time, nonresident competition for oil related jobs will also increase.

The largest economic impact of oil development would be on State and North Slope Borough revenues from revenue sharing of royalty payments, severance taxes, and property taxes. The amount of public revenue generated would depend on the price of oil and the amount of economically recoverable reserves. Additional development in CAMA would mean a continuing growth trend in these local revenue sources.

Conclusion: The Proposed Action would not prevent potential future employment, income, population, and public revenues associated with mineral development.

UNAVOIDABLE ADVERSE IMPACTS

Unauthorized ORV use would cause temporary impacts to naturalness and solitude. On nondesignated WSA lands seismic exploration would degrade naturalness by causing "green trails" that would be visible from the air for two to three years.

Placer mining would cause wilderness values to be degraded or lost on up to 23,000 acres. Exploratory drilling would temporarily disturb wilderness values on 300 acres over a 30 year period. Oil and gas production and development would affect wilderness values on up to 1.1 million acres of WSA lands and up to 527,000 acres of state and ASRC lands.

One placer mine would disturb an estimated 250 acres over the life of the mining operation.

Oil and gas development and construction, including pipeline construction and use, and placer mining would cause approximately 3,800 acres of direct loss of habitat as well as 63,000 acres of indirect disturbance of WSA lands not designated as wilderness.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Placer mining on nondesignated WSA lands would cause wilderness values to be degraded or to be lost on up to 23,000 acres. Oil and gas production and development would affect wilderness values on up to 1.1 million acres of WSA lands and up to 527,000 acres of state and ASRC lands.

SHORT-TERM USES VERSUS LONG-TERM PRODUCTIVITY

Wilderness designation of the Nigu block would provide long-term protection of the natural environment and solitude on about 1% of the CAMA WSA. This would occur without precluding potential future oil and gas or mining development and production within CAMA.

Wilderness values (naturalness and solitude) would be lost or permanently degraded by anticipated oil and gas and mining activities on up to 30% of the WSA.

Oil and gas development, pipeline construction, and placer mining would cause long-term loss of slightly less than 2% of the big game habitat within the WSA.

The anticipated oil and gas development would involve the long-term production of at least 675 million barrels of economically recoverable oil.

If oil exploration would not result in the discovery of oil fields of minimum economic size, the development of fields and construction of pipelines would not occur. In this case, neither oil production nor associated impacts to wilderness values would occur.

NO WILDERNESS / NO ACTION ALTERNATIVE IMPACT ANALYSIS

0 Acres Recommended for Wilderness Designation

3,680,000 Acres Nonwilderness

IMPACTS ON WILDERNESS VALUES

Impacts to wilderness values in the WSA would primarily be as a result of leasable and locatable mineral development. This alternative differs from the Proposed Action in that the 41,000 acre Nigu block is not designated wilderness. Within the Nigu Block mineral development is not expected to occur. Oil and gas development is not expected because the area is rated as having low potential for oil and gas occurrence, hardrock mineral development is not expected because of the area's remoteness and the lack of infrastructure. Therefore, impacts to wilderness values under this alternative would be the same as those described in the Proposed Action.

Conclusion: Although wilderness values would not receive legislative protection, impacts to wilderness values would be the same as identified for the Proposed Action.

IMPACTS ON OIL AND GAS DEVELOPMENT

All approximately 3,406,000 acres of CAMA WSA lands where BLM retains management of the subsurface estate would be open to federal oil and gas leasing and development. An additional 274,000 acres of split-estate land (subsurface is owned by ASRC) would presumably be available to oil and gas development through ASRC. Hence all 3,680,000 acres of WSA lands would be available for oil and gas leasing (federal or ASRC) under this alternative. This includes approximately 3,330,000 acres of land with high potential and 350,000 acres of land with low potential for oil and gas occurrence.

Conclusion: Since all lands would be available for development, there would be no restrictions to oil and gas development. The level of oil and gas development would be similar to that described for the Proposed Action.

IMPACTS ON OIL AND GAS TRANSPORTATION ROUTES

Under this alternative, all WSA lands would be available to oil and gas transportation systems routes. WSA lands would likely be used for transportation systems to support economical oil and gas development in NPR-A. Transportation systems needed for development in NPR-A would be routed west-east to the existing TAPS. Based on oil and gas transportation and development scenarios for CAMA WSA lands (see Chapter 2), pipelines needed for future transportation systems would cross approximately 175 miles of WSA lands.

Conclusion: There would be no restrictions to oil and gas transportation systems as a result of this alternative. Anticipated oil and gas transportation systems would be similar to what would occur with the Proposed Action

IMPACTS ON LOCATABLE MINERAL DEVELOPMENT

All lands within the CAMA WSA would be open to hardrock mineral development under this alternative. Of these lands, approximately 3,344,000 acres are considered to have low potential for hardrock mineral occurrence, approximately 336,000 acres have a moderate potential (primarily for lead-zinc and related minerals) and no lands are considered to have a high potential for hardrock mineral occurrence. The overall probability for development of undiscovered but potentially occurring hardrock minerals is low due to the area's remoteness, lack of access and the availability of substantial lead-zinc deposits elsewhere in the state (e.g. at Red Dog and LIK Properties in western Alaska).

The only likely development within the CAMA WSA would be a placer gold deposit within approximately 275,000 acres of moderate potential land in the Brooks Range in and near the Utility Corridor south of Toolik Lake. Although the probability of finding a developable gold deposit is low, it is possible that given the access provided by the Dalton Highway and the relatively small size of operation required that a developable deposit would be located.

Conclusion: The anticipated level of mineral activity under this alternative would be similar to that of the Proposed Action; one placer gold mining operation would be anticipated.

IMPACTS ON BIG GAME WILDLIFE AND HABITAT

Under this alternative none of the 3,680,000 acres of land within CAMA WSA would be designated by Congress as part of the NWPS. Wildlife populations and their habitats would be impacted by surface disturbing activities (e.g. roads, drilling and pipeline pads, airstrips, etc.), traffic, human habitation and use, noise, and pollution (both air and water).

The impacts under this alternative would be the same as that of the Proposed Action except the 41,000 acre Nigu block would not receive wilderness protection. Due to the remoteness of the Nigu Block, lack of existing infrastructure, lack of discovery and presence elsewhere of minerals potentially occurring within this area, development of the Nigu block is not anticipated. Therefore, anticipated mineral development and impacts to wildlife would be the same as described under the Proposed Action.

Conclusion: Impacts to wildlife habitat on the 3,680,000 areas not designated as wilderness would occur. Approximately 3,800 acres of direct loss of habitat as well as 63,000 acres of indirect disturbance would occur on WSA lands. These impacts to wildlife populations and their habitats would be minimal because of the overall size of the area and the location of the development activities in relationship to crucial wildlife habitat.

IMPACTS ON RECREATIONAL OFF-ROAD VEHICLE (ORV) USE

Recreational use of ORVs within the WSA would be limited to recreational use of snowmachines with adequate snowcover.in accordance with BLM management policy except where recreational ORV use is prohibited by state law (five miles either side of the Dalton Highway).

Currently, there is little or no authorized recreational ORV use occurring on CAMA WSA lands. Unauthorized use within five miles either side of the Dalton Highway occurs but is quite light. Current federal policies are expected to continue and it is expected that state restrictions similar to those existing along the Dalton Highway would be placed on oil field access and pipeline roads if built. It is unknown how much the unauthorized ORV use would increase if the Dalton Highway is opened and development for oil and gas commences in central CAMA.

Conclusion: There would be no impact on ORV use on CAMA WSA lands, as a result of this alternative.

IMPACTS ON SUBSISTENCE USE PATTERNS

The discussion for the no wilderness alternative is the same as for the Proposed Action.

Conclusion: There would be potential adverse effects on subsistence use patterns in the areas not designated as wilderness. Some of these impacts may be temporary, others may be long-term. There would also be a potential impact to subsistence use patterns if hypothetical pipeline route B is constructed; however, mitigation measures that would be determined and applied at such time would cause an actual significant restriction to subsistence to be unlikely. Furthermore, because of the small areas involved in the total subsistence land usage of the villages using the WSA, this alternative would cause no significant restriction to subsistence uses or resources for any of the villages using the WSA lands for that purpose.

IMPACTS ON SOCIOECONOMIC RESOURCES

Impacts on socioeconomic resources would be the same as discussed under the Proposed Action.

Conclusion: The no wilderness alternative would not prevent potential future employment, income, population, and public revenues associated with mineral development.

ALL WILDERNESS ALTERNATIVE IMPACT ANALYSIS

3,364,000 Acres Recommended for Wilderness Designation

316,000 Acres of Nonwilderness

IMPACTS ON WILDERNESS VALUES

All 3,364,000 acres of WSA lands outside of the nonwilderness assessment area (316,000 acres) would be designated as wilderness and no leasable nor locatable mineral development would occur on WSA lands. Therefore wilderness values of naturalness, solitude, and primitive and unconfined recreation would not be affected on the 3,364,000 acres of designated wilderness.

Conclusion: Wilderness values would be preserved on 3,364,000 acres by wilderness designation.

IMPACTS ON OIL AND GAS DEVELOPMENT

Under this alternative, 3,090,000 acres of CAMA WSA lands would be closed to oil and gas development. This includes about 2,810,000 acres or 84% of the WSA lands with high potential for oil and gas occurrence. Available for development would be approximately 590,000 acres of WSA land. This area includes the 274,000 acres of split-estate land (the subsurface is owned by ASRC) and the 316,000 acre nonwilderness assessment area. All of the split-estate land is of high potential and approximately 246,000 acres of the nonwilderness assessment area is of high potential for oil and gas occurrence. The remaining 70,000 acres within the nonwilderness area is assigned a low potential for oil and gas occurrence. In total, the available lands include about 520,000 acres or 16% of the WSA lands with high oil and gas potential. No oil and gas leases currently exist on any CAMA WSA lands.

In addition to the potential impact on oil and gas development resulting from the closure of 2,810,000 acres of high potential WSA lands, the all wilderness alternative would also hamper potential development in NPR-A and on all CAMA lands including state and private lands. Wilderness designation of all WSA lands outside the "nonwilderness assessment area would effectively seal off the eastern side of NPR-A to future pipeline crossings. Consequently, potential oil and gas development within CAMA would not be facilitated by development of pipelines/roads from NPR-A to TAPS. (Note: ANILCA Title XI provisions to allow access across conservation units created by said Act would not apply to CAMA wilderness; ANILCA did not create a conservation unit in CAMA only a study area). The all wilderness alternative would also seal off much of the federal portion of the TAPS and Dalton Highway from new east-west pipelines/roads.

Conclusion: Oil and gas development on 2,810,000 acres or about 84% of the WSA with high potential for oil and gas occurrence would be foregone; potential development of oil and gas resources in NPR-A and on all other CAMA lands would also be hampered.

IMPACTS ON OIL AND GAS TRANSPORTATION ROUTES

All WSA lands, outside of the nonwilderness assessment area and lands identified by Sec. 1431 (j) of ANILCA for use by the Arctic Slope Regional Corporation (ASRC), would be unavailable for future oil and gas transportation routes. (Note: ANILCA Title XI provisions to allow access across conservation units created by that Act would not apply to CAMA wilderness; ANILCA did not create a conservation unit in CAMA only a study area). Wilderness designation of all WSA lands outside the nonwilderness assessment area would effectively seal off the eastern side of NPR-A to future pipeline crossings. Transportation systems authorized under provisions of 1431(j) of ANILCA do not provide access to NPR-A. Only at the northeast corner of NPR-A could overland access be constructed. The all wilderness alternative would also isolate a large portion of TAPS and the Dalton Highway from new east-west pipelines/roads by creating linear "barriers" of wilderness on either side of the TAPS.. Only at the northern end of the Utility Corridor and just north of Toolik Lake, where the nonwilderness assessment area extends to the edge of the Corridor, could east-west pipelines/roads cross Utility Corridor lands.

The only WSA land available for east-west pipeline routes, the "1431(j) corridor", does not provide access to NPR-A and is only available for use by ASRC. Should ASRC have a need for use of this area for an oil and gas transportation route in the future, cost of construction and design could increase substantially due to wilderness management as the utmost care would be required to minimize adverse impacts to wilderness values.

Conclusion: Oil and gas transportation routes that may be necessary in the future to develop potential oil and gas resources in CAMA would be severely restricted; overland access to TAPS from southern portions of NPR-A would be precluded.

IMPACTS ON LOCATABLE MINERAL DEVELOPMENT

Subject to valid existing rights, 3,090,000 acres of CAMA WSA lands would be closed to hardrock mineral development. Available for mineral development would be a total of 590,000 acres of WSA lands. This includes the 274,000 acres of split-estate lands (subsurface is owned by ASRC) and the 316,000 acre nonwilderness assessment area which is now closed to mineral entry but which is expected to be opened in the future. There are currently 13 properly located and maintained (placer) claims within the CAMA WSA. It is expected that none of these 13 claims will prove valid.

Of the 590,000 acres of WSA which would be available to future location and development, about 530,000 acres of land is of low potential and about 60,000 acres is of moderate potential for locatable mineral occurrence. Considering current mineral evaluations, existing infrastructure, availability elsewhere of potentially occurring mineral deposits and the relatively small area of moderate potential lands available, it is unlikely that a developable mineral deposit will be discovered.

Conclusion: Potential mineral development within CAMA would be forgone under this alternative. The placer gold operation anticipated under the no wilderness alternative would not occur.

IMPACTS ON BIG GAME WILDLIFE AND HABITAT

Wilderness designation of 3,364,000 acres would protect wildlife species within the area, especially caribou, grizzly bear, moose and Dall's sheep. This alternative would achieve a natural distribution, population numbers, and interaction of indigenous wildlife species on CAMA WSA lands. Natural processes and the various land based ecosystems would be allowed to continue unaffected on the designated wilderness lands, without undue human influences. Wilderness designation would largely prevent wildlife displacement and habitat alterations that could otherwise occur.

Wilderness recreation use, especially ORV use as provided for in Section 1110 of ANILCA, would disturb wildlife, such as caribou, grizzly bear, moose, and Dall's sheep. ORV use of these lands is currently causing negligible detrimental impacts to wildlife or their habitats, and it is not anticipated that by designating these lands wilderness that it would change the present use to any significant degree.

The moose and grizzly bear concentration areas especially on WSA lands along the Colville River and in the central and northern portions of CAMA would be protected from disturbance associated with mineral exploration and development. Protection of crucial and limited habitat (e.g. riparian areas) is very important to maintaining healthy big game populations. A large portion of the crucial habitat particularly for moose and grizzly bear, is on either private or state lands. Even though designation of the WSA lands as wilderness would not prevent the adjacent land owners from allowing wildlife disturbing activities to occur on their lands, designation would provide lands for sanctuary and perpetuation of populations. Dall's sheep populations and habitat would greatly benefit from this designation as most of the sheep habitat that exists within the CAMA would be protected under this alternative. This includes lambing areas as well as mineral licks.

Under this alternative, energy development would be allowed on 274,000 acres of split-estate lands (the subsurface is owned by ASRC) and the 316,000 acres of nonwilderness assessment area. Disturbance from oil and gas activities to WSA lands and to adjacent state and private lands would be minimized. Disturbance would be limited to seismic survey activity, and one or two exploration wells on split estate lands, and one or two exploration wells on the nonwilderness assessment lands. Construction of an east-west pipeline to TAPS could not cross any WSA lands other than 4 miles within the nonwilderness assessment area.

Conclusion: Wilderness designation would provide long term protection to wildlife and their habitats particularly to moose and grizzly bear crucial areas, especially along riparian zones; and Dall's sheep habitat along the southern mountainous portions of CAMA. Natural processes and the various land based ecosystems would be allowed to continue unaffected on the designated wilderness lands, without undue human influences.

IMPACTS ON RECREATIONAL OFF-ROAD VEHICLE (ORV) USE

Since most of the current (unauthorized) recreational ORV use occurs within the nonwilderness assessment area, and little or no ORV use occurs on the remaining WSA lands, wilderness designation would not impact recreational use of ORVs.

Conclusion: There would be no impact on recreational ORV use as a result of this alternative.

Table 4.2 **All Wilderness Alternative Impacts to Subsistence Areas**

VILLAGE	SUBSISTENCE AREA DEVELOPMENT	HYPOTHETICAL OIL & GAS DEVELOPMENT	MINING
Anaktuvuk Pass	11,000,000 acres total subsistence area; 7% (760,300 acres) is in WSA	0% whole 0.003% of WSA	None
Nuiqsut	7,488,000 acres total subsistence area; 3% (247,700 acres) is in WSA	None	None
Kaktovik	9,000,000 acres total subsistence area; 1% (115,200 acres) is in WSA.	None	None
Nolan/ Wiseman	553,000 acres total subsistence area; .2% (1,150 acres) is in WSA.	None	None

IMPACTS TO SUBSISTENCE USE PATTERNS

This alternative causes the least disturbance to subsistence uses and resources. Since oil and gas and hard rock mineral development would not occur on designated lands, the only likely disturbance would be from a pipeline crossing a small portion of the Utility Corridor to reach the TAPS. Approximately 120 acres would receive primary or secondary disturbance. Less than 0.003% of the Anaktuvuk Pass subsistence area would be affected, and none of the subsistence areas of Nuiqsut, Kaktovik, or Nolan/Wiseman would be affected (Table 4.2). Habitat disturbance would be minimized, causing less disruption of animal foraging and migration patterns. Recreation use would be limited because of lack of easy access, and ORV use would be limited primarily to subsistence and traditional users (Appendix C).

Conclusion: There would be no adverse effects on subsistence resources and uses in the wilderness alternative. The all wilderness alternative would cause no significant restriction to subsistence uses or resources for any of the villages using the WSA lands for that purpose.

IMPACTS ON SOCIOECONOMIC RESOURCES

The potential for oil and gas and placer mining related employment, income, population, and public revenues described for the Proposed Action would be greatly reduced with this alternative. Since managing for all wilderness would preclude oil pipelines across CAMA, potential oil and gas developments beyond CAMA to the west could also be forgone. Related employment, income, public revenues and population changes would also be foregone.

Conclusion: The potential for future oil and gas and placer mining related employment, income, population changes and public revenues would be foregone.

PARTIAL WILDERNESS ALTERNATIVE IMPACT ANALYSIS

486,000 Acres Recommended for Wilderness Designation

3,194,000 Acres of Nonwilderness

IMPACTS ON WILDERNESS VALUES

Naturalness, solitude and the opportunity for primitive and unconfined recreation would be preserved and available for future generations in the 486,000 acres of designated wilderness

On the 3,194,000 acres of WSA lands not recommended for wilderness, motorized use could have long-term impacts on naturalness. However, due to the area's remoteness, existing legal restrictions on ORV use, and the lack of resident population, ORV activity is expected to be light and widely dispersed. Therefore, motorized use would be expected to have only short-term impacts on naturalness and solitude. These short-term impacts would result from recreational use of airplanes (generally by sport hunters and hikers) for access to WSA lands and ORV use (mostly unauthorized use of snowmachines) from the Dalton Highway during the months of September through November. Use of snowmachines for subsistence purposes and general access by area residents would also account for temporary disturbance, usually during winter months.

Geological and geophysical (seismic) exploration activities would cause no long-term impacts to wilderness values. Short term and localized loss of naturalness due to "green trails" would occur. These green trails would be visible from the air for 2 to 3 years but difficult to detect from the ground. Solitude and scenic values would be impacted only during the actual period of seismic operations. Since no recreational use occurs during the time seismic operations are being conducted, these intrusions would not be noticed.

Exploratory drilling would cause surface disturbance and thus loss of naturalness to approximately 250 acres of land over a 30 year period. No impacts would occur to the perception of naturalness, solitude, nor opportunity for primitive and unconfined recreation since no recreational users would be present at the time of drilling.

It is anticipated that oil and gas production and development would cause surface disturbance and direct loss of naturalness to 10,725 acres of WSA lands and 3,450 acres to state and private (ASRC) lands. This would have an effect on the perception of naturalness, solitude and scenic qualities on 1,028,300 acres of WSA lands and 568,000 acres of State and ASRC lands.

Conclusion: Wilderness values would be preserved on 486,000 acres by wilderness designation. Impacts from geophysical exploration would be the same as with the Proposed Action. Oil and gas development and production would affect wilderness values on 1,028,300, acres of WSA and 568,000 acres of state and ASRC lands.

IMPACTS ON OIL AND GAS DEVELOPMENT

Under this alternative, 2,920,000 acres of CAMA WSA lands would be opened to federal oil and gas leasing. It is also expected that the 274,000 acres of split estate lands (the subsurface is owned by ASRC) would be available to oil and gas development through ASRC. Hence, it is expected that all CAMA WSA lands, approximately 3,194,000 acres, outside the proposed wilderness areas would be available for oil and gas development. This includes approximately 3,067,000 acres or about 92% of the WSA lands with high potential for oil and gas occurrence.

Closed to oil and gas development because of wilderness management would be the 486,000 acres of proposed wilderness. This includes approximately 263,000 acres or about 8% of the WSA with high potential for oil and gas occurrence. The remaining 223,000 acres of land within the proposed wilderness areas are of low oil and gas potential. No oil and gas leases currently exist on any CAMA WSA lands.

Conclusion: Potential development on 263,000 acres or about 8% of the WSA with high potential for oil and gas occurrence would be foregone. It is anticipated that 3,067,000 acres of high potential land would be leased for oil and gas exploration and development.

IMPACTS ON OIL AND GAS TRANSPORTATION ROUTES

Under this alternative, the 3,194,000 acres of WSA not recommended for wilderness designation would remain available for oil and gas transportation routes. The 486,000 acres of WSA lands within the Nigu Extension block, the Glacier block, the Your Creek block and the Oolamnagavik block would be closed to the routing of oil and gas transportation systems except as provided for by Sec. 1431(j) of ANILCA. The location and physical characteristics of the Nigu Extension block, the Glacier block, and the Your Creek block are such that there is little likelihood that future oil and gas transportation systems will be impeded by wilderness management of these areas. However, future oil and gas transportation routes may be impeded by wilderness management of the Oolamnagavik block. The Oolamnagavik block is situated in an area of high oil and gas potential, is between NPR-A and TAPS, contains terrain suitable for construction of pipelines and is the largest single block of federal land in the WSA outside of the Utility (TAPS) Corridor. (Note: the "1431(j) corridor", does not cross the entire block and is only available for use by ASRC.)

As a result of wilderness management, future oil and gas transportation systems would be routed around, rather than across, the Oolamnagavik block. As described in Chapter 2 this would increase slightly (by less than 5%) the overall length of a hypothetical pipeline route across southern CAMA between NPR-A and TAPS and result in a greater portion of the pipeline being located on nonfederal land. Under this alternative about 35% of this pipeline route would be on nonfederal land, under the no wilderness alternative about 26% of the route would be on nonfederal land. Rerouting of this pipeline would result in greater development, construction and maintenance costs due to the additional length, payment of full market value for the right-of-way and perhaps for additional gravel costs (if gravel must be obtained from private land owners). These additional costs are not expected to increase by more than 5% the overall cost of this pipeline (as compared to the no action alternative).

Conclusion: Oil and gas transportation systems routed across southern CAMA from NPR-A would be routed around designated wilderness increasing costs (by less than 5%) for construction and maintenance.

IMPACTS ON LOCATABLE MINERAL DEVELOPMENT

Under this alternative 486,000 acres of CAMA WSA lands would be closed to hardrock mineral development. This includes approximately 126,000 acres of land with moderate potential and 360,000 acres of land with low potential for hardrock mineral occurrence. Currently, no mining claims exist on any lands recommended as wilderness under this alternative.

Available for mineral development would be the remaining 3,194,000 acres of land within the CAMA WSA. This includes the 274,000 acres of split estate lands (subsurface is owned by ASRC) and the 540,000 acres of land within the "inner Utility Corridor" which is now closed but which is expected to be opened to development in the future.

Within the CAMA WSA, the lands with moderate potential for hardrock mineral occurrence within the Brooks Range in and near the Utility Corridor south of Toolik Lake (approximately 275,000 acres) have the greatest (but still low) potential for development. Development, if it were to occur, would likely be the result of a placer gold discovery. However, under this alternative approximately 96,000 acres or almost 35% of the area is closed to hardrock mineral development. With such a large portion of the Brooks Range-Corridor area closed to development, the probability of discovering an economically recoverable placer deposit is decreased to the point that no hardrock mineral development is anticipated under this alternative.

Conclusion: The probability for mineral development under this alternative is reduced about 35% from the Proposed Action and the No Wilderness Alternative; no mining is anticipated.

IMPACTS ON BIG GAME WILDLIFE AND HABITAT

Wilderness designation of 486,000 acres (four blocks) of CAMA WSA lands would benefit the wildlife species within the area, especially moose, grizzly bear and Dall's sheep. This alternative would achieve a natural distribution, population numbers, and interaction of indigenous wildlife species on approximately 13% of the WSA lands within CAMA. Natural processes and the various land based ecosystems would be allowed to continue unaffected on the designated wilderness lands, without undue human influences. By designating these four areas as wilderness, the lands would continue undisturbed, eliminating the possibility of alteration of habitats due to mineral and oil and gas exploration and development.

Allowances by Section 811 and 1110 of ANILCA concerning uses of ORVs in a designated area, should have very minimal effect on wildlife populations within the four blocks. This use is currently occurring and is presently not having any detrimental effects on either habitat or wildlife populations. ORV use is extremely minimal, and is not expected to increase appreciably in the future. Therefore, even though ORVs are allowed within the designated areas, impacts to wildlife are minor, and disturbance to habitat is insignificant.

On the remaining 3,194,000 acres not designated wilderness, wildlife populations and their habitats would be impacted by surface disturbing activities (roads, drilling and pipeline pads, airstrips etc.), traffic, human habitation and use, noise, and pollution (both air and water). No hardrock mineral development is anticipated under this alternative.

In analyzing impacts of oil and gas development and other human activities on wildlife populations and their habitats, it is impossible to give precise demographic or population change predictions of what might result from a broad range of potential development scenarios. The significance of effects on wildlife and their habitat would depend on many factors, including, but not limited to, exact location, duration, and the scheduling and extent of the development activities. In permitting development activities, the protection of crucial and limited habitat (e.g. riparian areas, mineral licks) is very important to maintaining healthy wildlife populations.

Certainly the greatest direct loss of wildlife habitat would result from oil and gas development and production facilities, roads, and pipelines. Production and development facilities would generally impact those WSA lands in the central and northern portion that lie within the high and moderate potential for oil and gas reserves. Direct disturbance to wildlife would be much greater on these lands because of the infrastructure needed for oil an gas facilities. The significance of effects on wildlife and their habitat would depend on the location of the development activities. Protection of crucial and limited habitat (e.g. riparian areas, mineral licks) is very important to maintaining healthy big game populations.

The primary effect on big game (e.g. caribou, moose, and grizzly bear) would be a direct loss of 2,385 acres of habitat for production facilities, roads, and gravel pits, and 800 acres for pipelines (Table 2.3). In addition, an indirect loss of approximately 6,400 acres (1/2 mile radius from facilities) of habitat associated with disturbance from camp facilities (e.g. noise, lights, etc.), and the indirect loss of habitat along 160 miles of pipelines (approximately 51,000 acres, 1/4 mile either side) that is primarily associated with disturbance from vehicle traffic would occur. This would cause a disruption of the levels and distribution of resident and migratory populations within the immediate vicinity of the development facility or pipeline. In addition, east-west pipelines could potentially hinder migratory patterns of big game animals (particularly caribou) within CAMA. Animals that remain within the immediate development area or along the pipeline route (1-2 miles radius), may be lost to vehicle collisions, hunting/poaching, or could become a nuisance animal (e.g. bears) and have to be destroyed.

Under the partial wilderness alternative, 3,194,000 acres of land within the WSA would be open to oil and gas development activities. The direct loss of 3,185 acres (.0010%) and indirect loss of 57,400 acres (.018%) of land would be a minimal impact to wildlife populations and their habitats because of the overall size of the area and the location of the development activities in relationship to crucial wildlife habitat. Within CAMA the riparian zones (crucial habitat for moose and grizzly bear) generally run in a north-south direction, while Dall's sheep crucial habitat (mineral licks, lambing areas) are generally located in the mountainous regions. The development facilities, roads, human habitation areas proposed under this alternative are located on non-crucial wildlife habitats. The proposed pipelines (east-west) would cross crucial habitats in a perpendicular manor and would have minimal impacts on the overall wildlife habitat available. However, if the development activities and/or pipelines change to other locations and the 3,185 acres of direct loss and 57,400 acres of indirect loss were to occur within wildlife crucial use areas (e.g. riparian zones, mineral lick areas, denning sites, etc.) the impact could become more significant due to the limited acres of crucial habitats. In addition, the potential disruption from east-west pipelines, roads, and associated human activities could hinder migratory patterns of big game animals (particularly caribou) within CAMA. Approximately 30,000 Caribou (12% of the

Western Arctic Herd) migrate through the CAMA area each year and interaction with the proposed pipelines can be expected. Presently there is no way to identify exactly where a development field, pipelines, or other oil and gas activity will take place, consequently no precise estimate of impacts to wildlife crucial habitats can be made, outside of evaluating the proposed action.

Under the partial wilderness alternative, 2,813,000 acres of land within WSA would be open to oil and gas related geophysical and exploratory activities. Geophysical operations within the CAMA area would be episodic in nature. It is predicted that these operations would be conducted over an average of approximately 500 miles of WSA lands each year. Geophysical operations would be authorized and conducted only during the winter months (November thru May) when conditions allow for ground vehicles to cross the tundra with minimal impact to the vegetative mat (12 inches of frozen ground and 6 inches of snow). In addition only vibroseis techniques would be used, which eliminates surface disturbance caused by explosives used in earlier operations (pre 1980). The effects of (vibroseis) geophysical activities on wildlife and vegetation would include: disturbance of animals present within the immediate area of the operation, green trails caused by the compaction of snow on the tundra, pollution (small fuel leaks from equipment), and occasional surface disturbance from blades or tracks of vehicles breaking through the snow layer.

Some disturbance would occur to the animals that are present in the immediate vicinity of any geophysical operation. However, because most wildlife on the Arctic Slope have either migrated out of the area (caribou, waterfowl, raptors) or are hibernating (bears, small mammals) during the winter months, this disturbance would be confined to a few species: caribou (some remain during the winter), moose, furbearers (wolves, fox, wolverine), and Dall's sheep. However, this disturbance is very temporary in nature (1-2 days in most locations), and most animals will move away from the area until the operation moves on and then return to their normal activities.

Disturbance of the vegetative mat would occasionally occur when the blade or tracks of vehicles break through the snow cover. In addition, for 1-2 years after an operation green trails could be present where the compacted snow provides additional moisture resulting in the vegetation growing slightly more vigorously than on surrounding areas. However, because BLM monitors these operations closely and allows operations to proceed only when the conditions provide adequate protection to the vegetative surface (12 inches of frozen ground and 6 inches of snow) these types of disturbance are short-term and sporadic in nature and do not cause any long-term effects to the vegetation cover.

It is projected that approximately 1 exploratory well (winter only) would be drilled annually beginning in about 10 years for a cumulative total of approximately 25 wells on WSA lands in the next 30 years. Disturbance would occur to the animals that are present in the immediate vicinity of any exploratory well operation. However, as previously explained, only a few species, caribou, moose and furbearers (wolves, fox, wolverine) are present within the area during winter months and exploratory drilling activities are localized. Exploratory drilling would result in 10 acres of direct habitat loss (e.g. gravel pads) with an additional 640 acres (1/2 mile radius from well) being indirectly affected by human activities (e.g. noise, lights, smoke, etc.). Because of the localized impact and timing of exploratory drilling, there would be only minor disruption of activity patterns of those animals within the immediate area. The animals that are present would move away from the activity zone during the operation.

Disturbance of the vegetative mat would also occur as a result of exploratory drilling operations. Approximately 10 acres of habitat would be lost with the construction of gravel pads for associated human activities and other drilling operations for a cumulative total of 250 acres of disturbance over the period of exploratory drilling operations. The most recent drilling operation within the Arctic District was successful in using ice pad construction instead of gravel. This eliminated any permanent gravel pad remaining after the operation. If this method proves to be effective for future wells, then the direct loss of 10 acres of wildlife habitat per well would be eliminated. However, even if gravel pads are used for future exploratory wells, the disturbance is localized and generally small, therefore it is not anticipated that exploratory wells will cause any long-term effect to the overall vegetation cover or wildlife populations within CAMA.

ORV use of the nondesignated lands is minimal and does not cause any appreciable impacts to wildlife populations or their habitats. ORV use is not expected to change as a result of this alternative.

Conclusion: There are expected to be no additional impacts to wildlife populations or their habitats on the designated 486,000 acres (four blocks) of wilderness. Approximately 3,500 acres of direct loss of habitat as well as 58,000 acres of indirect disturbance would occur on nondesignated WSA lands. These impacts to wildlife populations and their habitats would be minimal because of the overall size of the area (3,680,000 acres of land within the CAMA WSA), and the location of the development activities in relationship to crucial wildlife habitat.

IMPACTS ON RECREATIONAL OFF-ROAD VEHICLE (ORV) USE

Wilderness designation would close 486,000 acres of the WSA to general recreational ORV use. Traditional use of aircraft, motorboats and snowmachines (during the winter) would be allowed. Access to these areas is primarily by aircraft. No other recreational use of ORVs is occurring in these areas with the possible exception (given its proximity to the Dalton Highway) of some unauthorized snowmachine use in the Glacier block. Such use, if occurring, would most probably occur in conjunction with caribou hunting.

On the remaining 3,194,000 acres of WSA lands not designated as wilderness, current state and federal restrictions on ORV use would continue. At the present time all recreational ORV use is prohibited within five miles of the Dalton Highway by state law. Recreational use of ORVs outside this area is limited to recreational use of snowmachines with adequate snowcover. It is expected that state restrictions similar to those existing along the Dalton Highway would be placed on oil field access and pipeline roads if built. Currently, there is little or no recreational ORV use occurring except along the Dalton Highway (which is unauthorized due to the state closure). It is unknown how much the unauthorized ORV use will increase if the Dalton Highway is opened and development for oil and gas commences in central CAMA.

Conclusion: Like the Proposed Action there would be no impact on ORV use on CAMA WSA lands, as a result of this alternative.

IMPACTS ON SUBSISTENCE USE PATTERNS

Hypothetical Pipeline Route B is rerouted under this alternative to avoid some WSA lands. This change is reflected in Table 4.3 as a change in the percentage of WSA lands crossed by Pipeline B; however, the total affected subsistence area (considering both WSA and non-WSA lands) would not change as a result of this rerouting. Except that there is no placer mine in the Nolan/Wiseman subsistence use area the discussion is the same as for the Proposed Action.

Conclusion: There would be potential adverse effects on subsistence use patterns in the areas not designated as wilderness (Appendix C). Some of these impacts may be temporary, but some may be long-term. There would also be a potential impact to subsistence use patterns if hypothetical pipeline route B is constructed; however, mitigation measures that would be determined and applied at such time would cause an actual significant restriction to subsistence to be unlikely.

Furthermore, because of the small areas involved in the total subsistence land usage of the villages using the WSA, the partial wilderness alternative would cause no significant restriction to subsistence uses or resources for any of the villages using the WSA lands for that purpose.

Table 4.3 Partial Wilderness Alternative Impacts on Subsistence Areas

VILLAGE	SUBSISTENCE AREA	HYPOTHETICAL OIL & GAS DEVELOPMENT				MINING
		Pipeline A	Pipeline B	Pipeline C	Indirect	
Anaktuvuk Pass	11,000,000 acres total subsistence area; 7% (760,300 acres) is in WSA.	.007% whole 0.1% WSA	.06% whole. 0.9% WSA	.02% whole 0.4% WSA	.01% whole 14% WSA	None
Nuiqsut	7,488,000 acres total subsistence area; 3% (247,700 acres) is in WSA.	.01% whole 0.3% WSA	None	None	0.1% 4%	None
Kaktovik	9,000,000 acres total subsistence area;1% (115,200 acres) is in WSA.	None	None	None	None	None
Nolan/ Wiseman	553,000 acres total subsistence area; .2% (1,150 acres) is in WSA.	None	None	None	None	None

IMPACTS ON SOCIOECONOMIC RESOURCES

Impacts on socioeconomic resources would be the same as discussed under the Proposed Action.

Conclusion: The all wilderness alternative would not prevent potential future employment, income, population, and public revenues associated with mineral development.

OOLAMNAGAVIK-ETIVLUK WILDERNESS ALTERNATIVE IMPACT ANALYSIS

867,000 Acres Recommended for Wilderness Designation

2,813,000 Acres of Nonwilderness

IMPACTS ON WILDERNESS VALUES

Naturalness, solitude and the opportunity for primitive and unconfined recreation would be preserved and available for future generations in the 867,000 acres of designated wilderness

On the 2,813,000 acres of WSA lands not recommended for wilderness, motorized use would be expected to have short-term impacts on naturalness and solitude. These short-term impacts would result from recreational use of airplanes (generally by sport hunters and hikers) for access to WSA lands and ORV use (mostly unauthorized use of snowmachines) from the Dalton Highway during the months of September through November. Use of snowmachines for subsistence purposes and general access by area residents would also account for temporary disturbance, usually during winter months.

Mineral development (placer gold mining) would cause approximately 250 acres of direct surface disturbance and would further impact the perception of naturalness, solitude and scenic values of approximately 23,000 acres of adjacent land.

Geological and geophysical (seismic) exploration activities would cause no long-term impacts to wilderness values. Short term and localized loss of naturalness due to "green trails" would occur. These green trails would be visible from the air for 2 to 3 years but difficult to detect from the ground. Solitude and scenic values would be impacted only during the actual period of seismic operations. Since no recreational use occurs during the time seismic operations are being conducted, these intrusions would not be noticed.

Exploratory drilling would cause surface disturbance and thus loss of naturalness to 200 acres of land over a 30 year period. No impacts would occur to the perception of naturalness, solitude, nor opportunity for primitive and unconfined recreation since no recreational users would be present at the time of drilling.

It is anticipated that oil and gas production and development would cause surface disturbance and direct loss of naturalness to approximately 6,890 acres of WSA lands and 3,600 acres of state and private (ASRC) lands. This would have an effect on the perception of naturalness, solitude and scenic qualities on approximately 800,900 acres of WSA lands and 731,000 acres of state and ASRC lands.

Conclusion: Wilderness values would be preserved on 867,000 acres by wilderness designation. Exploratory drilling would temporarily disturb 200 acres over a thirty year period. Oil and gas development and production would affect wilderness values on 800,920 acres of WSA lands and 731,000 acres of state and ASRC lands.

IMPACTS ON OIL AND GAS DEVELOPMENT

Open to federal oil and gas leasing under this alternative would be 2,539,000 acres of CAMA WSA lands. It is also expected that the 274,000 acres of split estate lands (the subsurface is owned by ASRC) would be available to oil and gas development through ASRC. Hence, it is expected that all CAMA WSA lands (approximately 2,813,000 acres) outside the proposed wilderness areas would be available for oil and gas development. This includes approximately 2,463,000 acres or about 74% of the WSA lands with high potential for oil and gas occurrence.

Closed to oil and gas development because of wilderness management would be the 867,000 acres of proposed wilderness. This entire area is of high potential for oil and gas occurrence and represents approximately 26% of the high potential lands within the WSA. No oil and gas leases currently exist on any CAMA WSA lands.

Conclusion: Potential development on 867,000 acres or about 26% of the WSA with high potential for oil and gas occurrence would be foregone.

IMPACTS ON OIL AND GAS TRANSPORTATION ROUTES

Under this alternative, the 2,813,000 acres of WSA not recommended for wilderness designation would remain available for oil and gas transportation routes. The 867,000 acres of WSA lands within the Oolamnagavik-Etivluk wilderness area would be closed to the routing of oil and gas transportation systems except as provided for by Sec. 1431(j) of ANILCA. Future oil and gas transportation routes may be impeded by wilderness management of the Oolamnagavik-Etivluk area. This recommended wilderness area is situated in an region of high oil and gas potential, is between NPR-A and TAPS, contains terrain suitable for construction of pipelines and includes the largest single block of federal land in the WSA outside of the Utility (TAPS) Corridor. (Note: the "1431(j) corridor", does not cross the entire block and is only available for use by ASRC.)

As a result of wilderness management, future oil and gas transportation systems would be routed around, rather than across, the Oolamnagavik-Etivluk area. As described in Chapter 2 this would force such a pipeline further south and increase slightly the overall length of a hypothetical pipeline route across southern CAMA between NPR-A and TAPS (by about 5%). This would also result in a greater portion of the pipeline being located on nonfederal land. Under this alternative about 48% of this pipeline route would be on nonfederal land, under the no wilderness alternative about 26% of the route would be on nonfederal land. Rerouting of this pipeline would result in greater development,construction and maintenance costs due to the additional length, payment of full market value for the right-of-way and perhaps for additional gravel costs (if gravel must be obtained from private land owners). These additional costs are expected to increase by no more than 5-10% the overall cost of this pipeline (as compared to the no wilderness/no action alternative and Proposed Action).

Conclusion: Oil and gas transportation systems routed across southern CAMA from NPR-A would be routed around designated wilderness increasing costs for construction and maintenance by no more than 5-10% as compared to the no wilderness/no action alternative.

IMPACTS ON LOCATABLE MINERAL DEVELOPMENT

The 867,000 acres designated as wilderness would be closed to mineral entry and location. This designated area is of low potential for hardrock mineral occurrence. Currently, no mining claims exist on any lands recommended as wilderness under this alternative.

All 2,813,000 acres of CAMA WSA lands outside the proposed wilderness area would be open to hardrock mineral development in the future. This includes the 274,000 acres of split estate lands (the subsurface is owned by ASRC) and the 540,000 acres of land within the "inner Utility Corridor" which is now closed but which is expected to be opened to development in the future.

The only likely development within the CAMA WSA would be on a placer gold deposit within the approximately 275,000 acres of moderate potential land in the Brooks Range in and near the Utility Corridor south of Toolik Lake. With the access provided by the Dalton Highway,it is anticipated that a relatively small size operation would occur.

Conclusion: Since, the proposed wilderness area has a low potential for hardrock mineral development, wilderness management would not impact mineral development. One placer gold mining operation would be anticipated on nondesignated lands.

IMPACTS ON BIG GAME WILDLIFE AND HABITAT

Wilderness designation of 867,000 acres (two blocks) of CAMA WSA lands would benefit the wildlife species within the area, especially moose and grizzly bears. This alternative would achieve a natural distribution, population numbers, and interaction of indigenous wildlife species on approximately 23.5% of the WSA lands within CAMA. Natural processes and the various land based ecosystems would be allowed to continue unaffected on the designated wilderness lands, without undue human influences. By designating these two areas as wilderness, the lands would continue undisturbed, eliminating the possibility of alteration of habitats due to mineral and oil and gas exploration and development.

Allowances by Section 811 and 1110 of ANILCA concerning uses of ORVs in a designated area, should have very minimal effect on wildlife populations within the four blocks. This use is currently occurring and is presently not having any detrimental effects on either habitat or wildlife populations. ORV use is extremely minimal, and is not expected to increase appreciably in the future. Therefore, even though ORVs are allowed within the designated areas, impacts to wildlife are minor, and disturbance to habitat is insignificant.

On the remaining 2,813,000 acres not designated wilderness, wildlife populations and their habitats would be impacted by surface disturbing activities (roads, drilling and pipeline pads, airstrips etc.), traffic, human habitation and use, noise, and pollution (both air and water).

Any hardrock mineral development within CAMA/WSA which might occur would likely be on a placer gold deposit within the approximately 275,000 acres of moderate potential land in the Brooks Range. A placer mining operation within this area would likely disturb approximately 250 acres of land as a result of the construction of buildings, stripping, processing, and tailings disposal during the life of the activity (30-40 years). Direct disturbance is generally limited to five-ten acres each year with reclamation being conducted on an annual basis. However, reclamation efforts, which would recontour the land and revegetate the surface, cannot completely restore the land to its natural state, consequently some loss of wildlife habitat would occur from any active mining operation. In addition, indirect disturbance to wildlife would occur on an additional 640 acres (1/2 mile radius from mine site) being affected by human activities (e.g. noise, aircraft, traffic, lights, smoke, etc.). These direct and indirect disturbances would impact Dall's sheep and moose and their habitat. However, due to the limited acres of disturbance over the lifetime of the project, the detrimental impacts from this anticipated mining activity would be very minimal based on the development assumptions discussed, and the overall habitat available to Dall's sheep and moose.

In analyzing impacts of oil and gas development and other human activities on wildlife populations and their habitats, it is impossible to give precise demographic or population change predictions of what might result from a broad range of potential development scenarios. The significance of effects on wildlife and their habitat would depend on many factors, including, but not limited to, exact location, duration, and the scheduling and extent of the development activities. In permitting development activities, the protection of crucial and limited habitat (e.g. riparian areas, mineral licks) is very important to maintaining healthy wildlife populations.

The greatest direct loss of wildlife habitat would result from oil and gas development and production facilities, roads, and pipelines. Production and development facilities would generally impact those WSA lands in the central and northern portion that lie within the high and moderate potential for oil and gas reserves. Direct disturbance to wildlife would be much greater on these lands because of the infrastructure needed for oil an gas facilities. The significance of effects on wildlife and their habitat would depend on the location of the development activities. Protection of crucial and limited habitat (e.g. riparian areas, mineral licks) is very important to maintaining healthy big game populations.

The primary effect on big game (e.g. caribou, moose, and grizzly bear) would be a direct loss of 1,340 acres of habitat for production facilities, roads, and gravel pits, and 700 acres for pipelines (Table 2.4). In addition, an indirect loss of approximately 3,200 acres (1/2 mile radius from facilities) of habitat associated with disturbance from camp facilities (e.g. noise, lights, etc.), and the indirect loss of habitat along 140 miles of pipelines (approximately 45,000 acres, 1/4 mile either side) that is primarily associated with disturbance from vehicle traffic would occur. This would cause a disruption of the levels and distribution of resident and migratory populations within the immediate vicinity of the development facility or pipeline. In addition, east-west pipelines could potentially hinder migratory patterns of big game animals (particularly caribou) within CAMA. Animals that remain within the immediate development area or along the pipeline route (1-2 miles radius), may be lost to vehicle collisions, hunting/poaching, or could become a nuisance animal (e.g. bears) and have to be destroyed.

Under the Oolamnagavik-Etivluk alternative, 2,813,000 acres of land within CAMA WSA would be open to oil and gas development activities. The direct loss of 2,040 acres (.0007%) and indirect loss of 48,200 acres (.017%) of land to wildlife populations and their habitats would be a minimal impact because of the overall size of the area and the location of the development activities in relationship to crucial wildlife habitat. Within CAMA the riparian zones (crucial habitat for moose and grizzly bear) generally run in a north-south direction, while Dall's sheep crucial habitat (mineral licks, lambing areas) are generally located in the mountainous regions. The development facilities, roads, human habitation areas proposed under this alternative are located on non-crucial wildlife habitats. The proposed pipelines (east-west) would cross crucial habitats in a perpendicular manor and would have minimal impacts on the overall crucial wildlife habitat available. However, if the development activities and/or pipelines change to other locations and the 2,040 acres of direct loss and 48,200 acres of indirect loss were to occur within wildlife crucial use areas (e.g. riparian zones, mineral lick areas, denning sites, etc.) the impact could become more significant due to the limited acres of crucial habitats. In addition, the potential disruption from east-west pipelines, roads, and associated human activities could hinder migratory patterns of big game animals (particularly caribou) within CAMA. Approximately 30,000 Caribou (12% of the Western Arctic Herd) migrate through the CAMA area each year and interaction with the proposed pipelines can be expected. Presently there is no way to identify exactly where a development field, pipelines, or other oil and gas activity will take place, consequently no precise estimate of impacts to wildlife crucial habitats can be made, outside of evaluating the proposed action.

Under the Oolamnagavik-Etivluk alternative 2,813,000 acres of land within WSA would be open to oil and gas related geophysical and exploratory activities. Geophysical operations within the CAMA area would be episodic in nature. It is predicted that these operations would be conducted over an average of approximately 500 miles of WSA lands each year. Geophysical operations would be authorized and conducted only during the winter months (November thru May) when conditions allow for ground vehicles to cross the tundra with minimal impact to the vegetative mat (12 inches of frozen ground and 6 inches of snow). In addition only vibroseis techniques would be used, which eliminates surface disturbance caused by explosives used in earlier operations (pre 1980). The effects of (vibroseis) geophysical activities on wildlife and vegetation would include: disturbance of animals present within the immediate area of the operation, green trails caused by the compaction of snow on the tundra, pollution (small fuel leaks from equipment), and occasional surface disturbance from blades or tracks of vehicles breaking through the snow layer.

Some disturbance would occur to the animals that are present in the immediate vicinity of any geophysical operation. However, because most wildlife on the Arctic Slope have either migrated out of the area (caribou, waterfowl, raptors) or are hibernating (bears, small mammals) during the winter months, this disturbance would be confined to a few species: caribou (some remain during the winter), moose, furbearers (wolves, fox, wolverine), and Dall's sheep. However, this disturbance is very temporary in nature (1-2 days in most locations), and most animals will move away from the area until the operation moves on and then return to their normal activities.

Disturbance of the vegetative mat would occasionally occur when the blade or tracks of vehicles break through the snow cover. In addition, for 1-2 years after an operation green trails could be present where the compacted snow provides additional moisture resulting in the vegetation growing slightly more vigorously than on surrounding areas. However, because BLM monitors these operations closely and allows operations to proceed only when the conditions provide adequate protection to the vegetative surface (12 inches of frozen ground and 6 inches of snow) these types of disturbance are short-term and sporadic in nature and do not cause any long-term effects to the vegetation cover.

It is projected that approximately 1 exploratory well (winter only) would be drilled annually beginning in about 10 years for a cumulative total of approximately 20 wells on WSA lands in the next 30 years. Disturbance would occur to the animals that are present in the immediate vicinity of any exploratory well operation. However, as previously explained, only a few species, caribou, moose and furbearers (wolves, fox, wolverine) are present within the area during winter months and exploratory drilling activities are localized. Exploratory drilling would result in 10 acres of direct habitat loss (e.g. gravel pads) with an additional 640 acres (1/2 mile radius from well) being indirectly affected by human activities (e.g. noise, lights, smoke, etc.). Because of the localized impact and timing of exploratory drilling, there would be only minor disruption of activity patterns of those animals within the immediate area. The animals that are present would move away from the activity zone during the operation.

Disturbance of the vegetative mat would also occur as a result of exploratory drilling operations. Approximately 10 acres of habitat would be lost with the construction of gravel pads for associated human activities and other drilling operations for a cumulative total of 200 acres of disturbance over the period of exploratory drilling operations. The most recent drilling operation within the Arctic District was successful in using ice pad construction instead of gravel. This eliminated any permanent gravel pad remaining after the operation. If this method proves to be effective for future wells, then the direct loss of 10 acres of wildlife habitat per well would be eliminated. However, even if gravel pads are used for future exploratory wells, the disturbance is localized and generally small, therefore it is not anticipated that exploratory wells will cause any long-term effect to the overall vegetation cover or wildlife populations within CAMA.

ORV use of the nondesignated lands is minimal and does not cause any appreciable impacts to wildlife populations or their habitats. ORV use is not expected to change as a result of this alternative.

Conclusion: There would be no additional impacts to wildlife populations or their habitats on the designated 867,000 acres (two blocks) of wilderness. Impacts to wildlife habitat on the areas not designated as wilderness would occur. Approximately 2,500 acres of direct loss of habitat as well as 49,000 acres of indirect disturbance would occur on WSA lands. These impacts to wildlife populations and their habitats would be minimal because of the overall size of the area (3,680,000 acres of land within the CAMA WSA), and the location of the development activities (based on the Oolamnagavik-Etivluk alternative) in relationship to crucial wildlife habitat.

IMPACTS ON RECREATIONAL OFF-ROAD VEHICLE (ORV) USE

Under this alternative recreational ORV use within the 867,000 acres of CAMA WSA designated as wilderness would be prohibited except to traditional use of aircraft, motorboats and snow machines. Currently there is no known recreational ORV use occurring. Given the location and remoteness of these lands, no new recreational ORV use was anticipated. Therefore, ORV use in the Oolamnagavik-Etivluk wilderness area would not be affected.by wilderness designation.

On the remaining 2,813,000 acres of WSA lands not designated as wilderness, current state and federal restrictions on ORV use would continue. At the present time all recreational ORV use is prohibited within five miles of the Dalton Highway by state law. Recreational use of ORVs outside this area is limited to recreational use of snowmachines with adequate snowcover. It is expected that state restrictions similar to those existing along the Dalton Highway would be placed on oil field access and pipeline roads if built. Currently, there is little or no recreational ORV use occurring except along the Dalton Highway (which is unauthorized due to the state closure). It is unknown how much the unauthorized ORV use will increase if the Dalton Highway is opened and development for oil and gas commences in central CAMA.

Conclusion: Like the Proposed Action, there will be no impact on ORV use on CAMA WSA lands, as a result of this alternative.

IMPACTS ON SUBSISTENCE USE PATTERNS

There is a reroute of hypothetical Pipeline Route B to avoid the Oolamnagavik wilderness area. These changes are shown in Table 4.4 as a change in the percentage of WSA lands crossed by Pipeline B ; however the total affected subsistence area (considering WSA and non-WSA lands) would not change as a result of the rerouting. Otherwise, the discussion is the same as for the Proposed Action.

Conclusion: There would be potential adverse effects on subsistence use patterns in the areas not designated as wilderness (Appendix C). Some of these impacts may be temporary, others may be long-term. There is also a potential impact to subsistence use patterns if hypothetical pipeline route B is constructed; however, mitigation measures that would be determined and applied at such time would cause an actual significant restriction to subsistence to be unlikely. Furthermore, because of the small areas involved in the total subsistence land usage of the villages using the WSA, the Oolamnagavik-Etivluk wilderness alternative would cause no significant restriction to subsistence uses or resources for any of the villages using the WSA lands for that purpose.

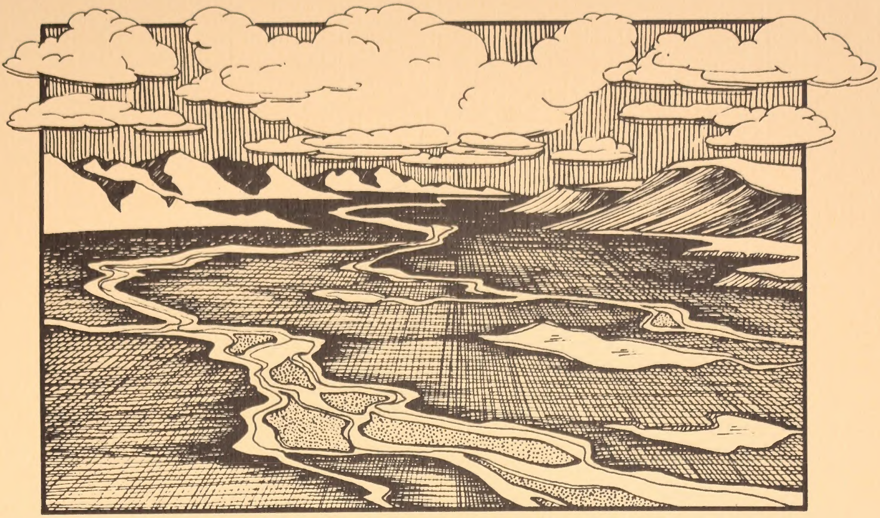
Table 4.4 Oolamnagavik-Etivluk Wilderness Alternative Impacts on Subsistence Areas

VILLAGE	SUBSISTENCE AREA	HYPOTHETICAL OIL & GAS DEVELOPMENT				MINING
		Pipeline A	Pipeline B	Pipeline C	Indirect	
Anaktuvuk Pass	11,000,000 acres total subsistence area; 7% (760,300 acres) is in WSA.	.007% whole. 0.1% WSA	.02% whole 0.4% in WSA	.02% whole 0.4% WSA	.01% whole 9% WSA	None
Nuiqsut	7,488,000 acres total subsistence area; 3% (247,700 acres) is in WSA.	.01% whole 0.3% WSA	None	None	0.1% whole 4% WSA	None
Kaktovik	9,000,000 acres total subsistence area; 1% (115,200 acres) is in WSA.	None	None	None	None	None
Nolan/ Wiseman	553,000 acres total subsistence area; .2% (1,150 acres) is in WSA.	None	None	None	None	.04% whole 21% of WSA

IMPACTS ON SOCIOECONOMIC RESOURCES

The nature of socioeconomic impacts would be the same as those described for the Proposed Action, except that the potential for oil and gas related employment, income, population and public revenues would be about 20% to 30% less because it was assumed that one less oil field would be developed.

Conclusion: The potential for future oil and gas related employment, income, population and public revenues would be 20% to 30% less than with the Proposed Action.



Chapter 5

Consultation and Coordination

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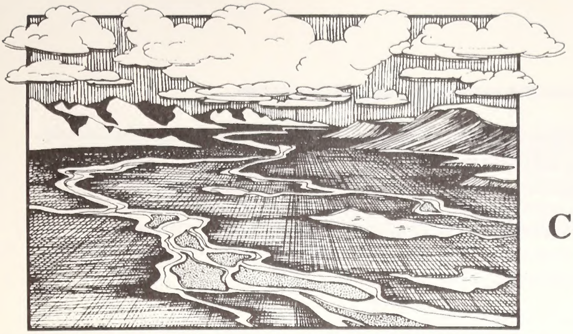
Public Involvement During the Development of the Wilderness EIS 5-1
Distribution of the Draft Wilderness EIS 5-1
Public Comment 5-2
Response to Public Comments 5-4
Comment Letters and Responses 5-5



CHAPTER 5

CONSULTATION AND COORDINATION

INTRODUCTION

Consultation, coordination and public involvement have occurred throughout the wilderness review process by means of public meetings in Fairbanks and affected rural villages in the study area. A number of briefings were held for federal and state agency personnel with an interest in the study. Meetings were held with various interest groups throughout the state in an effort to adequately coordinate study activities.

PUBLIC INVOLVEMENT DURING THE DEVELOPMENT OF THE WILDERNESS EIS

A public participation plan was prepared at the outset of the study to ensure that the public would have numerous opportunities to become actively involved early in the review process. Both formal and informal comments were encouraged and utilized.

A Federal Register notice of intent to prepare a resource management plan and conduct a wilderness review was published on January 16, 1986. News releases in Anchorage and Fairbanks also announced the beginning of the process and public scoping meetings were held in several communities to obtain public input. Newsletters were issued by the Arctic District Office to encourage additional public comments and to keep the public informed of the study's progress. A mailing list of over 500 organizations and individuals was complied and used to distribute these newsletters.

An "Intergovernmental Coordination Plan" was also prepared as part of a "preplanning document" early in the study process. Intergovernmental coordination consisted of a series of interagency workshops designed to review the progress of the Utility Corridor RMP and wilderness review and to allow technical input from the staffs of federal, state and local government agencies.

In addition to these technical workshops, the Office of the Governor of the State of Alaska was requested to assign a single contact point to represent the position of the state on matters related to the plan and the wilderness review. The Office of Management and Budget (OMB) in Juneau, Alaska was assigned the task of coordinating official state agency responses on all phases of the project.

DISTRIBUTION OF DRAFT WILDERNESS EIS

On August 18, 1987, the draft Central Arctic Management Area Wilderness Study and Wilderness Environmental Impact Statement (WEIS) was made available for public review and comment.

More than 450 copies of the draft WEIS were mailed as a supplement to the Draft Utility Corridor Resource Management Plan and Environmental Impact Statement (RMP/EIS). Copies were sent to federal, state, and local agencies, to conservation organizations, Native Alaskan organizations, the oil and gas industry, selected libraries, the media, and others who expressed interest. The BLM published a notice of availability for the draft WEIS and a schedule for wilderness hearings in the Federal Register on August 27, 1987. The Environmental Protection Agency published their notice of availability on August 28, 1987.

PUBLIC COMMENT

A 90 day public comment period officially ended November 30, 1987. Comments were accepted through December 18, 1987.

During this period, 97 letters signed by 118 different individuals were received which commented on the RMP/EIS and/or the wilderness EIS. Of the letters received, 53, representing 55 individuals or organizations specifically addressed the wilderness issue or other aspects of the wilderness EIS. The remaining responses were directed at the RMP/EIS and contained no specific comments on the Wilderness EIS.

Many, approximately 30 of the 53 letters addressing wilderness issues, appeared to be the result of mail-in campaigns inspired by conservation organizations. A variety of these letters have been published in this document. However, because of their similarity most of these letters were not reprinted. All letters received are available for review at the BLM Arctic District Office, 1541 Gaffney Road, Fairbanks Alaska 99703.

Public meetings to discuss the Wilderness EIS (and the accompanying RMP/EIS) were held in eight Alaskan communities. A total of 134 people attended these meetings. Formal wilderness hearings were held in conjunction with the public meetings at three locations: Barrow (9-29-87), Fairbanks (10-7-87), and Anchorage (10-9-87).

A total of ten people (see list below) made statements during the wilderness hearings. Wilderness related statements made were not of a substantive nature and have not been reproduced in this document. Most of the testimony was directed at the RMP and nonwilderness issues. Complete transcripts of the public meetings and hearings are available for review at the BLM Fairbanks Support Center, 1541 Gaffney Road, Fairbanks Alaska 99703.

Individuals Making Comment at Wilderness Hearings

Name	Where	Representing
Billy Adams	Barrow	Self
Tom Albert	Barrow	Self
Ben Nayeak	Barrow	Self
Rick Reakoff	Fairbanks	Self
Dave Lacey	Fairbanks	Self
Vernon Miller	Fairbanks	Self
Don Ellington	Fairbanks	Self
Mick Manns	Fairbanks	Self
Pat Isaacson	Fairbanks	Self
Susan Alexander	Anchorage	Wilderness Society

In addition to statements received at the wilderness hearings, the following agencies and individuals submitted written responses on the Wilderness EIS, an asterisk indicates those letters that have been reprinted.

Organizations and Individuals Submitting Written Responses

Federal/State

Bureau of Mines*
Environmental Protection Agency*
State of Alaska*

Environmental

Alaska Center for the Environment*
Northern Alaska Environmental Center*
Sierra Club*
Wilderness Society*

Other Organizations

Alaska Miners Association*
Dinyee Corporation*

Individuals

NAME (in order received)	RESIDENCE (state)
David Doudna	Alaska
Oscar Frank	Alaska
Dave Lacey	Alaska
Chuck Drummond	Alaska
Todd Miner	Alaska
Carl Reller	Alaska
Craig Schnorf	Alaska
Steve Reed	Alaska
William Walters	Alaska
Ann Ruggles	Alaska
Gladys Jettmar	Maryland
Frank Klein	Alaska
Sherry Lewis	Alaska
Jon Becker	Alaska
Jack Reakoff *	Alaska
Paul Havik	Alaska
Michael Rees *	Alaska
Joseph Sabastion	Alaska
Martha Reynolds	Alaska
Pam Scranton *	Alaska
Chris Scranton *	Alaska
Mark Meeks	Alaska
Roger Kaye	Alaska
Mrs. Frank Hutton	California
Don Soileau *	Alaska
Mike Zaccardi	Alaska
Clarence Petty	New York
Chris Standley *	Alaska
Michael Funke	Alaska
Mark Sturnick	Wisconsin

Gatlin Mitchell	Texas
Douglas Fruge	Alaska
John Dalle-Molle	Alaska
Mike Sterling *	Alaska
Heather Wheeler	Alaska
Alan Coulter	Vermont
Bruce Connery	Alaska
Ronald Chinn	Alaska
Chris Kent *	Alaska
Alan White *	California
Larry Sutton *	Alaska
Richard Spotts *	Alaska
Ron Beck	Washington
Hugh Richards	Alaska
Karen Jettmar	Alaska

* Asterisk indicates that letter has been reprinted

RESPONSE TO PUBLIC COMMENTS

All letters and responses were reviewed to identify those comments specific to the draft Wilderness EIS. Substantive comments which presented new data, questioned facts and/or analyses, or commented on issues bearing directly on the draft WEIS or the environmental impacts of the alternatives were fully evaluated and given responses. Changes or additions based on these comments have been incorporated into this final EIS. Other comments specific to the RMP not addressed in this document will be addressed in the final RMP. This document only addresses wilderness and wilderness related comments.

The following (reprinted) letters contain public comment on the draft Wilderness EIS. These letters also contain comments dealing with nonwilderness issues that were addressed in the Draft Utility Corridor RMP (published with the Wilderness EIS). Brackets have been added to highlight comments on the Wilderness EIS. Only bracketed comments which are numbered received a response. Responses appear following the letters and are identified by letter number (which appear on the top of each reprinted page) and comment number.

COMMENT LETTERS AND RESPONSES

ORGANIZATIONS		Letter Number
Federal/State	Bureau of Mines	1
	Environmental Protection Agency	2
	State of Alaska	3
Environmental	Northern Alaska Environmental Center and Alaska Center for the Environment	4
	Sierra Club	5
	Wilderness Society	6
Other	Alaska Miners Association	7
	Dinyee Corporation	8
INDIVIDUALS	Jack Reakoff	9
	Michael Rees	10
	Pam Scranton and Chris Scranton	11
	Don Soileau	12
	Chris Standley	13
	Mike Sterling	14
	Chris Kent	15
	Alan White	16
	Larry Sutton	17
	Richard Spotts	18

1

United States Department of the Interior

BUREAU OF MINES

Alaska Field Operations Center
201 E. 9th Avenue
Suite 101
Anchorage, Alaska 99501

BLM-AK-975
Nov 19 1 11 PM '87

November 17, 1987

Dave Ruppert, Project Manager
Bureau of Land Management
Arctic District Office
1541 Gaffney Road
Fairbanks, Alaska 99703

RE: Utility Corridor Draft Resource Management Plan and
Environmental Impact Statement

Thank you for the opportunity to review the above management plan. The Bureau of Mines has long been interested in and involved with the evaluation of mineral resources in the Central Arctic Management Area (CAMA).

Considerable information concerning mineral resources in the CAMA is available. The Dillon study cited is among the most recent and detailed reports available but applies only to a small portion of the study area (i.e. between 67 and 68°N latitude). Chapter 3, if not read closely, implies that the Dillon Study evaluated all of CAMA, but much of the area was not addressed by that study. The U.S. Geological Survey has completed AMRAP studies for the Philip Smith Mountains, Wiseman, and Chandalar quadrangles and the Bureau of Mines has completed several information circulars, open files, and contract reports covering the area (list attached).

The results contained in Table 3-9 require some explanation. Normally the units of measurement for precious metal commodities is ounces and for base metals pounds or tons. Several base metals are listed in ounce units (i.e. copper, molybdenum, etc.). I recommend limiting the units of measurements as it is difficult for the reader to switch between units. It should be pointed out that a substantial level of uncertainty is indicated by the Gross ore value figure used. At a high degree of certainty, 95% confidence level $13,000,000 worth of in place resources exist. At a lower degree of certainty (5% confidence level) $10,000,000,000 may exist. Another way of stating this is that the authors of the report are 90% confident that the actual value of in place resources using certain assumptions as to grade, depth, price, and deposit size will be between $13 million and $10 billion.

The minerals information in the draft RMP is good but incomplete and surficial. Additional resources are known to occur in CAMA or are suspected to be present based upon geologic analogy. For example, base metal terranes which occur in NPRA (Drenchwater, Story Creek, Whoopee Creek, etc.) are also exposed in CAMA and may contain similar types of mineralization.

1 continued

A mineral deposit location map would be useful. I would also suggest showing the mineral terranes/belts known to cross CAMA. The AEIDC/Bureau of Mines Mineral Terranes of Alaska maps published in 1982 would be useful for this purpose (enclosed).

For review purposes, a list or map showing the quadrangles covered by the plan would be useful as much of the minerals data is tabulated by quadrangle in Alaska.

1-1 On page 3-31, the draft states "Several smaller areas within this area (between 67 and 68° North Latitude) exhibit very high potential for locatable mineral occurrences". Yet on page J-34 of the Impact Analysis under Impacts to Locatable Mineral Development it is stated "No lands of high locatable mineral potential exist in CAMA". The Bureau agrees with the earlier statement. Due to low levels of exploration in the region, the potential for discovery of new Pb-Zn and other types of mineral occurrences should be considered high. Please note the presence of several major mineral terranes in CAMA.

Again, thank you for the opportunity to review the draft RMP. Feel free to contact me if you have any questions concerning these comments.

Robert B. Hoekzema
Robert B. Hoekzema
Anchorage Branch Chief

RBH/ap

Attachments

cc: Paul Gates
Mildred Gloster

1 continued

Bureau of Mines CAMA References

IC 8626	Mineral Resources of the Trans-Alaska Pipeline Corridor by John J. Mulligan. 1974, 24 pp., 9 figs.
IC 8915	Podiform Chromite Occurrences in the Caribou Mountain and Lower Kanuti River Areas, Central Alaska. Part 1: Reconnaissance Investigations by Jeffrey Y. Foley and Mark H. McDermott. 1983, 8 pp., 1 sheet.
IC 8916	Podiform Chromite Occurrences in the Caribou Mountain and Lower Kanuti River Areas, Central Alaska. Part 2: Beneficiation by D. C. Dahlin, L. L. Brown, and J. J. Kinney. 1983, 15 pp.
OFR 63-78	Mineral Investigations of Certain Lands in the Eastern Brooks Range: A Summary Report by James C. Barker. 25 pp., 6 figs.
OFR 66-78	Mineral Deposits of the Kanuti River Area: A Summary Report by Karen H. Clautice. 15 pp., 5 figs.
OFR 109-78	Mineral Appraisal of the Proposed Gates of the Arctic Wilderness National Park, Alaska: A Preliminary Comment by Staff, Alaska Field Operations Center. 29 pp., 5 figs.
OFR 36-79	Mineral Deposits of the Alatna, John, Killik, Kobuk, and the North Fork of the Koyukuk River Areas, Alaska: A Preliminary Comment by Staff, Alaska Field Operations Center. 23 pp., 2 figs.
OFR 37-81	Mineral Investigations of Certain Lands in the Eastern Brooks Range, 1978 by James C. Barker. 288 pp., 16 figs.
OFR 140-81	Coal and Uranium Investigations of the Yukon Flats Cenozoic Basin by James C. Barker. 63 pp., 9 figs.
OFR 80-83	Geological Sampling and Magnetic Surveys of a Tungsten Occurrence, Bonanza Creek Area, Hodzana Highlands, Alaska by Karen H. Clautice. 80 pp., 22 figs.
OFR 70-86	Maps Summarizing Land Availability for Mineral Exploration and Development in Northcentral Alaska, 1985 by Robert G. Bottge. 14 quadrangle overlays.
	Mineral Investigations of D-2 Lands in the Philip Smith Mountains and Chandler Lake Quadrangles by Paul A. Metz. Contract No. G0177175, Mineral Industry Research Laboratory. 1979. 27 pp.

1 continued

	Baseline Geochemical Investigations of the Red Dog and Drenchwater Creek Mineral Occurrences by Paul A. Metz. Contract No. G0177176, Mineral Industry Research Laboratory. 1979, 21 pp., 6 figs.
	Phase III. Barite Mineral Occurrences and Geology of the Atigun Canyon Area, Brooks Range, Alaska by M. S. Robinson and Paul A. Metz. Contact No. G0166180, Mineral Industry Research Laboratory. 1979, 2 sheets.
	Evaluation of the Mineral Resources of the Pipeline Corridor Phase I & II by Paul A. Metz, M. S. Robinson, and Chester Paris. Contract No. G0166180, Mineral Industry Research Laboratory. 1979. 264 pp.

Additional Bureau reports are available for adjacent land management areas such as NPRA (OFR 38-80, OFR 26-81, USGS Circular 844). Some of the authors are still working for the Bureau, ADGGS, or MIRL in Alaska.

Response to comment letter No. 1 - Bureau of Mines

1-1
Mineral terranes identified by others that extend through parts of CAMA have not been sampled or described in sufficient detail to allow the BLM, under its manual criteria (Appendix B), to designate the mineral potential of CAMA any higher than that stated in this document. However, the existence of these terranes is acknowledged and future mineral potential evaluations may change on the basis of additional information as it is made available.

2

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 SIXTH AVENUE
SEATTLE, WASHINGTON 98101

BLM-AK-975
DEC 11 1 13 PM '87

DEC 1 1 1987

REPLY TO ATTN OF WD-136

M. Thomas Dean
Arctic District Manager
Bureau of Land Management
Arctic District Office
1541 Gaffney Road
Fairbanks, Alaska 99703

Dear Mr. Dean:

The Environmental Protection Agency (EPA) has reviewed the Utility Corridor Draft Resource Management Plan/Draft Environmental Impact Statement (RMP/EIS) prepared by your staff. The draft RMP/EIS addresses "land use" alternatives for managing 6.1 million acres of public land under the authority of the Bureau of Land Management (BLM) along the Utility Corridor which protects the route of the Trans-Alaska Pipeline. The draft RMP/EIS deals with the Utility Corridor in federal management north of Fairbanks, the Venetie block, federal lands within the Central Arctic Management Area (CAMA) (all BLM lands east of National Petroleum Reserve-Alaska and north of 68° north latitude), and other small tracts south of 68° north latitude. Included as an appendix to the draft RMP/EIS is a supplemental draft EIS (SDEIS) for the CAMA Wilderness Study. This SDEIS examines the effects of wilderness designation or nondesignation for 3.68 million acres of BLM land on the north slope of Alaska.

Our review of the draft RMP/EIS and SDEIS was conducted in accordance with the National Environmental Policy Act (NEPA) and our responsibilities under Section 309 of the Clean Air Act. The purpose of our review is to determine whether the impacts of proposed federal actions are acceptable in terms of public health, welfare, and environmental quality. Our detailed review comments are enclosed.

We have no objections to the preferred wilderness designation as proposed in the SDEIS (Appendix J). However, we have several concerns with regard to the potential for adverse water quality impacts and subsistence impacts to occur under the BLM preferred alternative for the draft RMP/EIS. In particular, degradation of water quality from nonpoint sources and impacts to beneficial uses of rivers and streams can result from the activities managed by BLM. Since final decisions on future project-specific activities will, to a significant extent, determine the adequacy of the level of protection provided for water quality and other resources, more information is needed on the project-specific evaluation process and RMP monitoring. Without the benefit of reviewing this project-specific evaluation process, it is difficult to fully assess the potential for adverse effects.

2 continued

Based on our review we believe that Alternative B, the environmental protection and enhancement alternative, is the environmentally preferable alternative. However, there are several features of Alternative B that could be incorporated into the BLM preferred alternative that would provide some additional protection to water quality, sensitive habitats, and biological resources which in turn would benefit subsistence uses. A new alternative that combines features of the preferred alternative and the environmental protection aspects of Alternative B could still provide high levels of commodity outputs and successfully reflect the concept of multiple-use. 2-1

We are rating the CAMA Wilderness Study SDEIS LO (Lack of Objections). We are rating the draft RMP/EIS EC-2 (Environmental Concerns - Insufficient Information). Our environmental concerns are based on the potential for nonpoint degradation of water quality and the lack of information and assurances about the ability of the RMP to protect water quality and other resources at the project-specific evaluation stage. More detailed information is needed on the project-specific evaluation process, RMP monitoring, and project-specific monitoring. A summary of the EPA rating system for draft EISs is enclosed for your reference. This rating and a summary of our comments will be printed in the Federal Register.

Thank you for the opportunity to review the draft RMP/EIS and the SDEIS. If there are any questions about our review comments, please contact Salli Brough of my staff at (206) 442-4012 or FTS 399-4012.

Sincerely,

Robert S. Burd

Robert S. Burd
Director, Water Division

Enclosure

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2 continued

U.S. ENVIRONMENTAL PROTECTION AGENCY
DETAILED REVIEW COMMENTS

Utility Corridor Draft RMP/EIS
and
Central Arctic Management Area Wilderness Study SDEIS

Nesting EISs

Some confusion arose regarding the intended status of the "nested" CAMA wilderness study area environmental document. This confusion was attributable to the lack of clear reference to this SDEIS in the Table of Contents for the draft RMP/EIS. The SDEIS was listed only as Appendix J-Wilderness Supplement. The introduction (Chapter 1) made no explicit reference to two EISs. The introduction (p. 1-7) only mentioned a wilderness study area report and did not specifically refer to it as an EIS.

2-2 We acknowledge that BLM published its own Notice of Availability that referred to two EISs. However, those who received the draft RMP/EIS, but did not see the BLM notice, were not given a clear indication that there was a second interrelated EIS that warranted public review and comment.

Publishing such related EISs in one document is a useful means of presenting all pertinent information so that agencies and the public may make a reasoned decision on the proposed actions. Your efforts to promote a concurrent review of the wilderness management alternatives in this manner are commendable. However, clearer reference that this has been done would be helpful for future BLM projects.

Project-Specific Evaluation

We recognize the nature of RMPs as being a tier in advance of project-specific planning. We believe, however, that more information is needed that describes the project-specific evaluation process that will occur after the RMP is finalized. This is important because final decisions on specific projects will to a significant extent determine the adequacy of the level of protection provided for water quality and other resources.

Other BLM RMPs that we have reviewed have included Standard Operating Procedures (SOP), and Standard Design Features (SDF). SOP/SDFs are a key aspect of a RMP. They provide the basic goals, objectives, and guidelines for project-specific planning that may occur in the future. This draft RMP/EIS does not include SOP/SDFs.

The final EIS for the RMP should provide the EIS reviewer with a more detailed discussion and specific guidance on the project-specific evaluation process. Discussion of the management decisions and opportunities for public involvement are needed. What criteria will be used to determine when categorical exclusions, environmental assessments, and EISs will be used in RMP implementation? The final RMP/EIS should also describe the type of data which are needed to assure compliance with environmental standards and the criteria used by BLM staff to prevent adverse effects and improve existing environmental conditions.

2 continued

Based on our review of numerous land management EISs prepared by a variety of agencies, we believe that there are several important components of a project-specific evaluation process. These components include:

- A data base for existing conditions from which technical experts and the public can judge the expected effects.

- Thorough on-site inspection and administration during an activity, verifying that a particular activity is occurring as prescribed in contracts, leases, or permits.

- Environmental monitoring, during and after the completion of an activity to determine whether impacts were accurately predicted and whether changes to the RMP are needed to reduce effects from that activity or future projects.

- Feedback that is built into the process such that activities causing a problem will be modified before they are allowed to continue.

- SOF/SDF development and upgrading if needed to correct inaccurate predictions.

- The use of NEPA and opportunities for public involvement in project implementation.

In particular, measures available to BLM to protect resources from potential adverse effects of mineral entry and location, recreational use of the area, as well as oil and gas leasing should be summarized. When must Plans of Operation be filed and what must they contain? Will these receive review by other agencies or the public? What requirements can BLM attach to right-of-way permits and Plans of Operation (including reclamation bonding)? What "standard stipulations" exist for oil and gas leasing and mineral entry and location? Are there provisions for waivers from stipulations and special restrictions? If there are provisions for waivers, would such a waiver be coordinated with appropriate state and federal agencies and the public?

Monitoring

The final RMP/EIS should address monitoring in a more comprehensive manner. We recognize that future specific activities will require monitoring in specific ways that cannot always be precisely predicted at the RMP stage. At the same time, project-specific monitoring does little to determine whether the overall impacts of the RMP (especially cumulative effects) are as predicted.

The final RMP/EIS should present a monitoring and evaluation plan for the BLM lands included in the study area to determine if the RMP objectives are being met. This plan should specify the resource components to be monitored and discuss how, when, and where these components will be monitored. Monitoring intensity (frequency and number of studies) could vary among subareas based on the amount of data needed to determine if RMP objectives are

2 continued

being met. If necessary, the monitoring plan should describe the different monitoring needs of subareas. The monitoring plan should address the cumulative effects of the planned activities in the Utility Corridor. Finally the role of project-specific monitoring in the attainment of RMP objectives would provide useful information.

Monitoring and evaluation can provide an important feedback loop. The final RMP/EIS should also describe the process for modifying management practices if monitoring shows that important RMP objectives are not being met. Based on the monitoring results resource managers will be able to determine whether an action is accomplishing the intended purpose, whether mitigation measures and stipulations are adequate, and if decisions in the RMP are being implemented. Monitoring will also allow the resource managers to identify unpredicted effects and identify new data.

Alternatives

Each of the five alternatives evaluated in the draft RMP/EIS is focused on a separate goal. The preferred alternative emphasizes recreational opportunities, Alternative A is the continuation of current management practices (no action), Alternative B focuses on environmental protection and enhancement, Alternative C provides economic development opportunities, and Alternative D would lift all public land orders that withdraw Utility Corridor lands from state selection.

We believe that Alternative B is the environmentally preferable alternative. On a relative basis it minimizes the potential adverse impacts especially to water quality and numerous aquatic and terrestrial biological resources. It would not result in significant restriction to subsistence use and needs. This alternative best protects environmental quality while still providing commodity outputs.

We believe that land management can allow for the production of significant levels of commodity outputs, while providing reasonable protection for other resources. This concept represents true multiple use management. The other alternatives, specifically the preferred alternative and Alternative C, generally overemphasize commodity outputs without appropriate emphasis on protecting other resources. The goals for each alternative are not mutually exclusive. Several aspects of the preferred alternative and Alternative B could be combined to allow for significant commodity outputs without unnecessary and undue environmental degradation.

2–3 We suggest that BLM consider a new alternative that incorporates features of both the preferred alternative and Alternative B. For example, in Alternative B the BLM administered lands south of 68° north latitude are not open to mineral entry and location or oil and gas leasing near areas of critical environmental concern (ACEC), Dall's sheep lambing areas, mineral licks, moose concentration areas, portions of crucial anadromous fish habitat, and waterfowl habitat. A buffer area around each of these sensitive areas is

2 continued

provided. For the preferred alternative, we suggest that BLM incorporate these buffer areas around sensitive habitat and restrict mineral activity and oil and gas exploration and development within the buffer zones. The buffer areas represent a small decrease in the acreage open to mineral entry and location and oil and gas leasing and provide opportunities to limit potential environmental degradation.

For the area north of 68° north latitude we also recommend use of buffer areas around sensitive habitat (ACEC's, Dall's sheep lambing areas, mineral licks, etc.) where no mineral entry and location or oil and gas leasing would be allowed. A buffer area around the numerous mineral licks immediately north of 68° north latitude would provide protection to these critical areas. Closure of the inner corridor to mineral and oil and gas activities would provide protection to most of the known locations for sensitive and rare plants located on BLM administered lands. Closure of the inner corridor would also protect moose concentration areas, waterfowl habitat, and major portions of the crucial anadromous fish habitat in the CAMA area.

Off-Road Vehicle (ORV) Use Study

We concur with the BLM commitment to conduct an ORV use study. Increased access to the planning area and increased opportunities for recreation and development are likely to result in an increase in ORV use. The final RMP/EIS should discuss the methods for enforcing ORV use restrictions and their efficiency in minimizing adverse effects. The discussion in the final RMP/EIS would have to be more general pending the results of the ORV Use Study.

Response to comment letter No. 2 - EPA

2-1
Your comment suggesting a new alternative for the Utility Corridor RMP will be addressed in the final Utility Corridor RMP/EIS.

2-2
We appreciate your comments on this matter and in the future will follow your suggestions. Relating to this issue we point out that the Final RMP will be addressed in a separate EIS.

2-3
Your comment suggesting a new alternative for the Utility Corridor RMP will be addressed in the final Utility Corridor RMP/EIS.

3

STATE OF ALASKA

OFFICE OF THE GOVERNOR

OFFICE OF MANAGEMENT AND BUDGET
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November 30, 1987

Mr. Dave Ruppert
Project Manager
Department of the Interior
Bureau of Land Management
P.O. Box 1150
Fairbanks, AK 99707

Dear Mr. Ruppert:

SUBJECT: UTILITY CORRIDOR DRAFT RESOURCE MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT STATEMENT (STATE I.D. NO. AK8708200?/F)

The State of Alaska appreciates this opportunity to respond to the Utility Corridor Draft Resource Management Plan (RMP) and Environmental Impact Statement (EIS). This letter, with the enclosure, is submitted on behalf of state agencies and represents a consolidation of state concerns and comments. The enclosure contains specific state comments on the RMP and EIS.

The state has several major interests in the draft plan and EIS. Most important is our concern that the plan does not thwart state selections. Before discussing these interests at any great length, we would like to reiterate our position on the issue of land selections.

STATE SELECTIONS

A. General Concerns

The land selection provisions within the BLM Utility Corridor Draft RMP and EIS Preferred Alternative are not acceptable to the state.

The state's concerns can be summarized as follows:

1. The state desires to own land within the Haul Road corridor and the ANILCA Section 1431(j) corridor. The state has almost 25 million acres remaining in its Statehood land entitlement from the federal government. The land within these corridors is some of the highest value land that could be available for state selection. The preferred alternative prevents the state from receiving title to this land. Only Alternative D, which opens the entire area to state selection, is acceptable to the state.

3 continued

Dave Ruppert - 2 - November 23, 1987

2. The primary purpose for managing the utility corridor, which is for transportation and utility use, can be met under state management. The state already owns more than half the land in the Prudhoe Bay to Valdez corridor, including the oil and gas resources accessed by the corridor. Existing rights-of-way, including the Dalton Highway, TAPS oil line, and TAGS gas line are protected if the land is transferred into state ownership. The PLO 5150 withdrawal is not needed to protect transportation and utility uses.

3. BLM uses the plan to justify federal retention of the corridor for purposes other then transportation and utility uses. These objectives cannot be used to justify continuing PLO 5150. Many of these objectives can be accommodated under state ownership. The state can develop public recreation activities, provide land for private ownership, lease for oil and gas, and open land to mineral entry. BLM has also failed to consider fulfillment of the state's selection rights and access to state lands as objectives for the plan.

4. The plan does not justify closing the corridor specified in Section 1431(j) of ANILCA to state selection.

B. Specific Comments

1. The state desires to own land within the Haul Road Corridor and the ANILCA Section 1431(j) corridor. In June 1986, the state filed selection applications for 1.1 million acres of land within the Utility Corridor. These selections were made in accordance with the Department of Natural Resources' (DNR) Dalton Highway Selection Recommendations Report, dated June 1985, ANILCA Section 906(e), and Section 6 of the Alaska Statehood Act. The state has also filed selections on the land in the ANILCA 1431(j) corridor.

The preferred alternative restricts state land selections to south of the Yukon River, the Coldfoot node, and a small remnant of the east-west utility

3 continued

corridor near the Arctic National Wildlife Refuge (ANWR). The draft plan and EIS fail to justify the choice of the preferred alternative relative to other alternatives for state selections.

Land management plans are not the appropriate forum for BLM to determine whether the state can make land selections in an area. In fact, the state has consistently taken the position in this planning process that state land selections within the Utility Corridor should be considered as an implementation measure rather than one of several management alternatives in the plan (Letter Grogan to Penfold, September 29, 1986).

In the past, most large-scale withdrawals of land from state selection were made by, or related to, actions of the U.S. Congress, such as ANILCA, and ANCSA. Furthermore, BLM states that this plan looks at a ten-year horizon. The issue of state selections must be looked at from a longer term horizon because the state's selection rights expire in 1994 and the land base the state acquires through its selection must sustain it indefinitely.

These selection provisions of the BLM plan are inconsistent with state policy, which is to secure state ownership of portions of the Haul Road and ANILCA 1431(j) corridors. Section 202(c)(9) of the Federal Land Policy and Management Act (FLPMA) states that "land use plans of the Secretary under this section shall be consistent with state and local plans to the maximum extent he finds consistent with the federal law and the purposes of this Act." Federal regulations (43 CFR 1610.3.2) require that resource management plans shall, "to the maximum extent practical, be consistent with officially approved and adopted resource related policies and programs of other federal agencies, state and local governments, and Indian tribes." It is further required that the plan be submitted to the Governor and identify any known inconsistencies with state of local plans, policies, or programs. "The State Director shall accept the recommendation of the Governor if he determines that they provide for a reasonable balance between the national interest and the State's interest." The BLM Haul Road plan fails these tests of consistency.

2. The primary purpose for managing the utility corridor can be met under state management.

3 continued

Throughout the plan, BLM states that the primary justification for retention of the corridor is to protect utility and transportation values. When the corridor south of the Yukon River was opened to state selections, BLM conceded that transportation and utility uses were protected under state management. In other sections of this RMP, BLM acknowledges that state ownership will not impede transportation and utility uses of the corridor (refer to page 2-1 "Management Actions Common to all Alternatives" and the last sentence on page 2-53). Certainly the value of the corridor for transportation is at least as important to the State of Alaska as it is to the federal government. The oil and possible gas development, and any use of the corridor for access to minerals and recreation, are crucial to the economy of Alaska.

The state already owns more than half of the land crossed by the Trans-Alaska Pipeline and proposed Yukon Pacific Natural Gas Line. The state also owns most of the oil and gas lands accessed by the corridor. In addition, any future land conveyances to the state will be subject to valid existing rights, including the Trans-Alaska Pipeline right-of-way and the gas line rights-of-way. PLO 5150 is no longer needed to protect these transportation uses. To infer that state selections would impede future transportation use of this remaining segment is unjustified.

3. BLM uses the plan to justify federal retention of the corridor for purposes other than transportation and utility uses.

PLO 5150 is a land withdrawal exclusively for transportation and utility uses. The other objectives stated on page 4-47 cannot be used to justify continuing PLO 5150. Furthermore, all land uses proposed under the preferred alternative could be accommodated under state ownership. The state can develop public recreation facilities in the area and encourage private investment in recreation facilities. BLM also proposes some private land sales around development nodes. The state also has programs to facilitate private recreation leases and land sales.

BLM's objective of providing buffers to federal Conservation System Units is inconsistent with the Section 906(j) of the Alaska National Interest Conservation Act (ANILCA) and cannot be used to justify the continuation of PLO 5150.

3 continued

BLM fails to consider fulfillment of the state's land entitlement and providing access to state lands as plan objectives. BLM states that overall land management efficiency is best achieved by federal retention. We strongly disagree. The corridor is adjacent to over one million acres of state land in the Chandalar Drainage and over one million acres near Bettles. The corridor provides access to millions of acres of state land on the North Slope. The state owns the Dalton Highway which runs the length of the corridor. Land ownership would be consolidated and management efficiency improved by state ownership of the corridor.

4. The plan does not justify closing the corridor specified in section 1431(j) of ANILCA to state selection.

The plan does not explain or justify why BLM would retain the ANILCA 1431(j) corridor. This is land already selected by the state. Arctic Slope Regional Corporation (ASRC) has not exercised its option to apply for a federal right-of-way across this land and, furthermore, ASRC, BLM, and the oil industry now recognize that the 1431(j) strip is not a practical alignment for any future east-west pipeline through this area (the feasible route is across state land, one-and-a-half townships to the north, as mapped on page 4-9). We disagree with the statement on Page F-2 that PLO 6092 withdrew the 1431(j) corridor from state selection. This administrative action is of no effect in light of Section 906(j) of ANILCA, a Congressional action. BLM is on record (most recently in November, 1986) as merely suspending action on the state selection in the 1431(j) corridor while waiting for ASRC to exercise its option. In fact, in 1983, BLM was prepared to convey 186,851 acres of state selections in the 1431(j) corridor pending agreement by ASRC. Also, ANILCA 906(d) already conveyed T10S, R2E, U.M. to the state. The plan now offers no justification whatsoever to defeat 240,000 acres of state selections to protect a right-of-way covering a fraction of that land. Even if the right-of-way is applied for and granted, the interest would be fully protected in the land conveyance to the state and it would not be incompatible with state ownership of the townships through which it runs. The state also wishes to own this land because it is surrounded by state land and is scheduled for inclusion in the state's oil and gas lease sale 57 for July 1990. BLM offers no reason for retaining a six-by-sixty mile strip of land surrounded by a block of land presently owned by the state.

3 continued

In summary, we feel that BLM has failed to adequately deal with PLO 5150 and has failed to recognize the state's interest and rights to select this land.

The following comments on the draft RMP regarding subsistence, settlement, transportation and public access, fish and wildlife resources, Areas of Critical Environmental Concern, and recreation apply to whatever land BLM continues to manage within the Utility Corridor planning area.

SUBSISTENCE

3-1 We appreciate the fact that BLM used a variety of data sources in preparing the subsistence uses narrative and maps in Chapter 3, including published and draft information provided by the Division of Subsistence, Alaska Department of Fish and Game. However, the presentation in the draft RMP and EIS does not adequately characterize subsistence use patterns in the affected communities. The relative importance of areas used for subsistence resource procurement within and outside the planning area is not discussed. 3-2 Furthermore, the information depicted on the subsistence use maps is derived from diverse sources covering different time periods and may have been developed using different methodologies. The maps should indicate that the studies referenced were done independently and are not comparable for each community. We believe this oversight should be corrected and a disclaimer added which notes subsistence use areas and patterns are dynamic and subject to change over time for a variety of reasons.

The potential for impacts on subsistence to extend well beyond the corridor may be great. As stated above, this issue has not been adequately discussed in the draft RMP and EIS, yet the state has seen evidence of its occurrence. For example, the Yukon River Bridge area already attracts a large and possibly growing number of non-local residents who hunt and fish in an area important to local residents. Increased competition in the corridor area related to expanding use of the Dall River fishery by non-local residents has already occurred from increased access facilitated by opening the Haul Road. This is also a major concern to Stevens Village residents (see article in Fairbanks Daily News-Miner, 8-23-87).

The draft RMP and EIS has not examined subsistence uses, specifically in the context of cummulative impacts associated not only with potential Utility Corridor development, but also with other activities in adjoining areas.

Should the potential development activities proposed in the vicinity of the Utility Corridor (e.g., oil and gas lease sales,

3 continued

Trans-Alaska Gas System pipeline), the impacts of development presented by the BLM in the draft plan take on added significance.

3-3 The plan, in its ANILCA 810 findings, overstates the ability to mitigate impacts to subsistence. For example, the "Summary of ANILCA Findings for all Alternatives" (page 4-42, draft RMP and DEIS), indicates that impacts might be mitigated through changes to state hunting regulations. Short of reducing or closing seasons -- steps which might impact qualified subsistence users -- this section does not provide an adequate description and analysis of what steps the BLM proposes to take to mitigate impacts. We are also concerned that BLM has not recognized in its discussion of mitigation that economic factors could take precedence over proposed ANILCA 810 mitigation measures.

DEVELOPMENT NODES

The state supports BLM's proposal for a limited number of "development nodes" within the corridor. This draft RMP and EIS has focused and restricted major development activities to recommended nodal areas. We also support the management concept that allows certain activities specifically necessary for energy transportation be allowed in areas outside the nodes.

Prospect Creek is a logical location for a nodal point. However, Preferred Action 4 (pages 2-9 through 2-11) deletes the Prospect development node. Given the Alyeska Pump Station, the Prospect Airport, the state maintenance facility, and the junction with the future road to Bettles, the Prospect area is a likely nodal point. Any policy to try to prohibit its nodal function, regardless of its nodal designation, is impractical and will create administrative and realty problems.

State leasing of land on the Prospect Airport may be considered by BLM to be inconsistent with the nodal development concept. We support inclusion of Prospect as a formal node to eliminate this problem.

TRANSPORTATION AND PUBLIC ACCESS

A. Transportation

The overriding assumption stated at the beginning of the draft RMP and EIS is the "primacy of the energy transportation function of the Utility Corridor." No proposed action or set of actions is to be interpreted as restricting or limiting the construction of new energy transportation systems within the Utility Corridor.

We request that there be a consistent application of this goal statement in the discussion and consideration of alternatives. The overriding purpose or goal of the Utility Corridor should be reemphasized in each discussion of the alternatives. While other resources are important and should be managed properly, their management should be clearly described as secondary to the utility purpose of the corridor.

3 continued

The Utility Corridor should be considered the "backbone" of surface transportation in the northern part of the state. New access will probably branch off from the existing Dalton Highway (i.e., access to Ambler, access to Nuiqsut, and Barrow access to park and refuge lands, access to possible oil and gas resources). Additional facilities will probably be built within the corridor (i.e., a natural gas pipeline). Plus, the Dalton Highway and the oil pipeline will continue to be maintained, and the Dalton Highway will be improved over the next several years. All this indicates how important it is that the overall utility purpose of the corridor be protected.

B. Access

The state wishes to reemphasize the importance of identifying and preserving access options. Routes established or recognized by state or federal law (for example, RS 2477 rights-of-way, Alaska Omnibus Act, ANCSA Section 17(b), etc.), and of particular importance are the Dalton Highway, access to Bettles/Evansville, and the surface transportation route from the Dalton highway to Ambler, recognized in Section 201(4)(b) of ANILCA. We support designation of a transportation corridor within the Utility Corridor to access Bettles/Evansville and the Ambler Mining District. This option should be included in whatever alternative is adopted by BLM. We also support the BLM's commitment to work with the state to identify additional needed routes through the corridor.

FISH AND WILDLIFE RESOURCES

1. Important Wildlife Habitats

The state supports the measures proposed by BLM to protect important wildlife habitats in the preferred alternative. One-quarter square-mile closures at known mineral lick sites should be adequate for the protection of the licks themselves, and represents a progressive management approach to such limited habitat features. We would ask that references to "salt licks" be revised to "mineral licks" for consistency and correctness. The management of development activities in Areas Critical to Environmental Concern (ACEC's)

3 continued

surrounding mineral licks is an area where good coordination between BLM and the state Department of Fish and Game (ADF&G) is essential if the opportunity to avoid and mitigate impacts afforded by the ACEC designation is to be real instead of theoretical. The state requests that BLM route plans of operation under review by BLM in these areas to ADF&G for input on the likely impacts and mitigation measures appropriate for operations near licks or routes used by Dall sheep to access lick areas.

Also with regards to minerals licks, the BLM needs to clarify the extent of the non-occupancy zones proposed for mineral leasing activities in these areas. The state must be involved in the development of "Exploration and development stipulations... which... can be applied ... to... provide protection for other natural resource values" for lick areas as well as other high-value fish and wildlife habitats where non-occupancy or other stipulations are contemplated.

In addition, it would seem appropriate, in view of the BLM's proposals to close lick sites to mineral entry and to restrict surface occupancy for mineral leases, to restrict material sales in these areas.

2. Important Fish Habitats

The draft RMP proposes to prohibit material sales in the Jim River area within the streambed and floodplain. The state believes it is reasonable and appropriate to exclude gravel extraction activities from the active streambed in areas of fish spawning. However, we feel that gravel extraction can be conducted within the floodplain of the Jim River as long as appropriate stipulations are required to mitigate potential impacts to fish habitat. The BLM should address this option under Preferred Action 3 (page 2-9, RMP).

3. Interagency Cooperation

In analyzing the draft RMP and EIS evaluation of potential impacts to fish and wildlife resources and possible mitigation measures, the state has made assumptions based on our understanding of the duties of BLM and ADF&G as described in the Master Memorandum of Understanding (MMOU) currently in effect between the two agencies. Unless the state (ADF&G) is consistently provided with an opportunity for input on proposed actions on BLM lands, mitigation measures cannot be expected to reflect what the state considers appropriate.

3 continued

The proposed introduction of muskoxen to the "Oolamnagavik Block" is an example where increased cooperation between the BLM and ADF&G is essential. While ADF&G is not opposed to establishing muskox herd in new locations, it is premature to propose an actual transplant in this draft plan. The state would prefer that we be consulted about such matters prior to such definite statements being published. Our experience shows that prior to reintroducing muskox it is essential to precede the actual transplant with a period of public education. In addition, our information indicates that there may be no need to perform this particular transplant in view of the westward dispersal of existing muskox herd which has already put indivduals to the west of Anaktuvuk Pass. Introduction of muskoxen without taking the appropriate precautions will only cause management and enforcement problems for the state. An interagency discussion of this issue is required prior to a final planning decision. This approach would better reflect the intentions stated by both BLM and the state in the MMOU.

The draft RMP and EIS already contains statements in at least two places regarding the MMOU, which is a good start. In order to emphasize the need and intent for close coordination, as well as to increase the effectiveness of the document during the plan's implementation stages, we believe BLM should consider including the content of several important facets of the MMOU in the body of the plan. Chief among these, the document should specify that:

a) the Alaska Department of Fish and Game is the primary agency responsible for management of use and conservation of fish and wildlife resources on BLM lands.

b) the Alaska Department of Fish and Game is the primary agency responsible for policy development and management direction relating to uses of fish and wildlife resources on state and BLM lands, pursuant to applicable state and federal laws.

c) the BLM will manage their lands so as to conserve and enhance fish and wildlife populations.

d) the BLM and the Alaska Department of Fish and Game will cooperate in the management of fish and wildlife resources and habitat on Bureau lands and adjacent lands having common fish and wildlife

3 continued

management plans and objectives of both agencies.

e) the BLM recognizes the right of the Alaska Department of Fish and Game to enter onto Bureau lands at any time to conduct routine management activities which do not involve construction, disturbance to the land, or alterations of ecosystems.

The BLM should also consider including the entire text of the MMOU as an appendix to the plan.

CUMULATIVE IMPACTS ON WATER QUALITY

3-4 The draft RMP and EIS has not critically examined the potential cumulative impacts to water quality that may result from development in the Utility Corridor. If increased negative impacts to water quality are expected from energy development in the Utility Corridor, the draft EIS should describe the impacts and how they could be mitigated.

MITIGATION

The mitigation of potential impacts has not been examined in the draft plan and EIS. Very little information is provided as to what constitutes appropriate mitigation measures. This is of particular concern to the state with regards to water quality impacts resulting from activities such as settlement, mineral entry, oil and gas activities and off-road vehicle (ORV) use. Considering the scope of activities proposed to be accommodated in the draft plan and EIS, mitigation measures should be defined in the document, even if only provided as technical appendices. The state commented at length on the Trans-Alaska Gas System (TAGS) draft EIS and mitigation measures examined in that EIS process could be discussed in this draft plan and EIS. As stated in our comments under "Interagency Cooperation," unless the state is afforded an opportunity for input on proposed actions on BLM lands, mitigation measures may not reflect what the state considers appropriate.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN

Preferred Action 25 (page 2-17) designates thirteen Areas of Critical Environmental Concern (ACECs) as the Preferred Alternative within the Utility Corridor. ACECs are intended to provide additional protection for wildlife/subsistence resources. While the management recommendations for these ACEC's emphasize protecting a variety of values and resources, the overall purpose and priority of the Utility Corridor should be protected. The management philosophy behind the ACECs should be clearly worded to preclude them from interfering with the overall utility purpose of the corridor.

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RECREATION

The draft RMP and EIS fail to provide justification to support the conclusion that intensive recreation management is needed or warranted.

The discussion in "Levels of Recreation Activity," Chapter 3 (page3-10), considers only the type of recreational activity. Then later, on pages 3-18 and 3-19, the level of recreational use is based on the Alaska Department of Transportation and Public Facilities (ADOT/PF) average daily traffic counts at Dietrich. It is unclear on what basis the recreational demand estimates were made. The ADOT/PF average daily traffic counts do not specifically differentiate between how much traffic is recreational versus traffic for other purposes (e.g., commercial, truck traffic, mining, government). In fact, actual ADOT/PF traffic counts from 1982 through 1986 show a declining amount of traffic on the Dalton Highway (see comments on recreation in enclosure). Even if one were to use the traffic volumes without differentiating between types of traffic, the actual traffic count does not justify the level of recreation facilities proposed in the Preferred Alternative.

We are also concerned with the proposal in Preferred Action 12 (page 2-12), that recommends the corridor be designated into two recreation management areas, to coincide with the inner and outer corridor. The presentation in this Preferred Action does not discuss how this will be done consistent with the overriding purpose of the Utility Corridor. We agree that recreation can, and should be, an important use within the corridor; however, the draft RMP should not allow for blanket recreational designations within the corridor. Such designations could place the burden of proof that no prudent or feasible alternative exists on anyone who needs to spend federal money for transportation improvements [Section 4(f), DOT Act (80 Stat. 931; Public Law 89-670) 1968]. While land management officials may view this as of little consequence, transportation officials view this as formidable and restrictive.

Lastly, the recreation element of the draft plan fails to consider the role of the state in providing for and managing recreation resources along the Dalton Highway. The State's Comprehensive Outdoor Recreation Plan (SCORP) has not been discussed.

The remaining comments in this letter are organized by section and page number in the enclosure. These issues are specific comments and examples of our larger concerns discussed in this overview.

On behalf of the State of Alaska, thank you for the opportunity to review this draft Resource Management Plan and Environmental

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Dave Puppert - 13 - November 23, 1987

Impact Statement for the Utility Corridor. If we can be of assistance in clarifying these comments, please contact this office. The state looks forward to reviewing the final plan and EIS.

Sincerely,

Robert L. Grogan
Director

by Elizabeth A. Benson
Project Review Coordinator

Enclosure

cc Commissioner Judy Brady, ADNR, Juneau
Commissioner Dennis Kelso, ADEC, Juneau
Commissioner Collinsworth, ADF&G, Juneau
Commissioner Mark Hickey, ADOT/PF, Juneau
Rod Swope, Office of the Governor, Juneau
John Katz, Office of the Governor, Washington, D.C.
Larry Dietrick, ADEC, Juneau
Al Ott, ADF&G, Fairbanks
Tom Hawkins, ADNR, Anchorage
John D. Martin, ADOT/PF, Fairbanks
Dan Wilkerson, ADEC, Anchorage
Bill Copeland, ADNR/L&WM, Fairbanks
Matt Robus, ADF&G/Habitat, Fairbanks
Stan Leaphart, CACFA, Fairbanks
Michelle Sydeman, LGC, Anchorage
Alaska Land Use Council, Land Use Advisors Committee

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ENCLOSURE

BLM Utility Corridor Draft Resource Management Plan
and Environmental Impact Statement

SPECIFIC COMMENTS

Page IV and throughout the document, "Land Disposals...". It is inappropriate to use the term "disposal" when referring to state selections. Disposals are discretionary actions, while state land selections are a sovereign right established by the Alaska Statehood Act. The issue of state selections should be addressed separately from land disposals.

Page V, Access. The best way to provide access to state land is to allow the state to select land in the corridor that abuts state land. This difference in access between the alternatives should be acknowledged.

Page 1-1, second paragraph. The conditions that applied to utility corridor land between Washington Creek and the Yukon River are not that different from the area included for analysis in this plan. The state owns large blocks of land adjacent to the corridor east of Wiseman and west of the Jim River. Dinyea Corporation appealed the Bureau of Land Management (BLM) amendment to PLO 5150 south of the Yukon River demonstrating that these selections were not "noncontroversial" selections as stated here. The BLM should clarify this in the final document.

Page 2-1, Management Actions Common to All Alternatives. This section implies that oil and gas leasing will be allowed under each of the alternatives, but there is no further discussion in the draft plan and environmental impact statement (EIS) as to the extent of exploration and development activities to be permitted under each alternative. The state recommends that BLM revise those sections describing the individual management alternatives to include separate oil and gas narratives explaining the status of oil and gas exploration and development under each alternative.

Page 2-3, Realty Action 8. This paragraph states that the lands within the boundaries of the Arctic National Wildlife Refuge (ANWR) are presently withdrawn from all forms of appropriation by PLO 6607. Appendix F, however, contradicts this by stating that PLO 6607 was "essentially terminated" since Congress did not approve the withdrawal as required by Alaska National Interest Lands Conservation Act. This should be clarified in the final plan and EIS.

Page 2-3, Exchanges. To suggest considering land exchanges, selection relinquishments and other land trade schemes without first considering state selections ignores the state's land entitlement rights under the Statehood Act. If any lands within the planning area do not contain sufficient "national interest"

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to merit federal retention, they should first be made available for state selection rather than identified and held as potential exchanged lands to further the federal interest. If these lands do contain sufficient "national interest," the draft plan and EIS should state why and present discussion to justify their retention.

Page 2-4, Access. An RS 2477 trail can be established by statutory acceptance, construction, or use. Replace "constructed" with "established" (fifth line, page 2-4).

Page 2-8, Management Goal. The third paragraph is not a management goal and should be included under "Planning Issues" in Chapter 1.

Page 2-11, Preferred Action 8. This action should allow state land selections at all development nodes. The nodes are appropriate community grant selections provided for in Section 6(a) of the Alaska Statehood Act. The BLM has not provided adequate discussion of why this option was not considered in this preferred action.

Page 2-16, Preferred Actions 14 and 17. These actions will require that an Off-Road Vehicle (ORV) use study be conducted for the Utitliy Corridor in order to both evaluate and even modify the "limited" classification of the Utility Corridor proposed by the RMP. The proposed ORV plan will consider appropriate limitations on ORV use to protect subsistence resources. We endorse the BLM proposal to work with the state to design stipulations appropriate for protecting subsistence resources from negative impacts as a result of ORVs. However, the state cannot participate in an interagency effort of this kind at this time. Should, however, state laws governing the use of ORV's change, then we agree that an interagency planning process would be appropriate.

Page 2-33, Action B-5. This action allow no guiding and outfitting camps at Galbraith and Toolik Lakes. This policy appears to also extend to the state airport at Galbraith Lake. We therefore suggest that language be inserted to indicate that the BLM policy would not affect state policies for leasing airport property. The issue of appropriate uses for state airport land is separate from this plan and has implications statewide.

Page 2-34, Action B-7. This action support efforts by the state to relocate their Jim River maintenance camp to an area near Bonanza Creek. However, the plan should be updated to indicate that the state has made a substantial commitment to remaining at Jim River and, at this time, is not considering relocation.

Page 2-46, Action C-5. This action implies that BLM will only be making lands available via exchange. As we have stated before,

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lands should be made available for state selection first. Restricting the acquisition of land by exchanges only is not justified.

Page 2-53, Alternative D, third paragraph. The state agrees with the statement that "The primary purpose of the Utility Corridor, the transportation of energy minerals, would be maintained under this alternative." This statement supports our argument that PLO 5150 is no longer necessary and indicates BLM's agreement.

Page 3-1, Land Status, last paragraph. The draft plan does not make a clear distinction between lands "managed" by the BLM and lands "administered" by the BLM. This is a distinction that should be made clear throughout the text and maps.

Page 3-2, Access. This section includes a list of state maintained airports within the corridor. Dietrich airport should be deleted from that list.

Page 3-3, Rights-of-way. This section should note that the Wiseman-Nolan and Wiseman-Hammond River Roads are 100' wide Public Land Order rights-of-way which were conveyed to the state by the Omnibus Act Quit Claim Deed (page 44, route number 6270). This section should also discuss the establishment of a right-of-way to connect these routes with the Dalton Highway (especially the community of Wiseman).

Page 3-4, Land Use Authorizations, first sentence. Even though the word "potentially" is used, this sentence may mislead the public into believing all federal lands in the planning area will become open to mineral entry and oil and gas leasing as a result of this RMP. A description of the segregative effect of state and native selections and the BLM use authorization structure under these circumstances should be included in this section.

Page 3-15, Commercial Fisheries. Waldron Creek is located between the Yukon River Bridge and Stevens Village.

Page 3-18, Dalton Highway Traffic and Projected Recreational Use. This section indicates that the 1982 summer average daily traffic at Dietrich was 20 vehicles. The Alaska Department of Transportation and Public Facilities (DOT/PF) records indicate that at the annual average daily traffic was 80 vehicles for that same period. More recent figures (1986) indicate an annual average daily traffic volume at Dietrich of 73 vehicles.

When using these numbers to indicate the volume of recreational traffic, the BLM should keep in mind that these figures indicate 2-way traffic. Therefore, the actual daily number of round trips per day is half of the daily traffic and most of the traffic at Dietrich may be commercial or industrial.

Page 3-29, Development Nodes. This section indicates that the state is considering measures to stabilize the foundation and to floodproof the Jim River camp. This should be updated to indicate that stabilization measures have been accepted and implemented.

Page 3-33, Subsistence Economy. Replace "rabbit" with "hare."

Page 3-37, Subsistence Economy. The discussion of Nuiqsut could note that a report in preparation by Pedersen and Shishido provides a current assessment of subsistence resource harvest and use patterns in that community. The citation in the bibliography should be "Pedersen and Shishido in prep."

Page 4-40, Alternative D, Fisheries Resources. Many measures to protect streams in Alaska are regulated by the Alaska Department of Fish and Game and apply to both state and federal land. Stream protection should be similar under either management regime.

Page 4-40, Alternative D, Cultural Resources. The BLM does not conduct a "Section 106" cultural resource survey for lands transferred to state ownership. Such a review is not required to implement Alternative D.

Page 4-41, Section 810(a) finding for Alternative D. This finding is not relevant. Section 810(c) says "nothing herein shall be construed to prohibit or impair the ability of the State... to make land selections and receive land conveyances pursuant to the Alaska Statehood Act..."

Appendix B - Major Laws and Public Land Orders. The segregative effects of PLO 5169, PLO 5179, PLO 5180 and PLO 5186 regarding state selections were cancelled by PLO 5561, PLO 5581 and ANILCA Section 906(j)(1). Please revise this appendix accordingly.

Appendix F - ANILCA Section 604/606. The appendix should state that the state owns the beds of all navigable waterbodies even if the river was withdrawn for a Wild and Scenic River study in Section 604 of ANILCA pursuant to the Submerged Lands Act as confirmed by the Alaska Statehood Act.

Appendix L - Bibliography. The bibliography fails to include any Alaska Department of Natural Resources (DNR) land selection reports. BLM staff were involved in the planning process that led to the development of the DNR Dalton Highway Selection Recommendation Report dated June 1985.

MAPS

Base Maps. The base map from which the reference maps for the northern portion of the planning area were prepared should be corrected to show the Dalton Highway ending at the Deadhorse Airport (see Existing Access Map 1-2 for details).

Existing Access Maps. The Existing Access maps should show Umiat as a state maintained public airport. For the purpose of consistency in the draft plan, Allakaket and Hughes should also be shown as state maintained airports. Also, the Nuiqsut Airport should be moved to the west side of the Colville River channel to coincide with the location of the village.

Preferred Alternative Maps (Chapter 2). These maps indicate extensive areas to be opened for mineral entry and oil and gas leasing. Most of these areas, however, are state or native selected lands and are withdrawn from such appropriation. The maps are misleading as to the effect of this preferred alternative designation and the extent of BLM's management discretion. The maps should show clearly a distinction between areas where the results of this RMP would presently apply versus areas currently under selection status. All maps in the RMP should indicate where BLM presently has management discretion.

Land Status Maps (Chapter 3). To be consistent with the first land status map, this map should show the large blocks of state owned and state selected land east and west of the corridor and in the area immediately south of the Yukon River. Omitting these large blocks of state owned and state selected land downplays the importance of consolidation of ownership and access from the utility corridor to state land. This does not provide the reader with an accurate picture of land status and may be misleading when evaluating the conclusions drawn by BLM in its Preferred Alternative.

The three military reservations on the Arctic Ocean coast should be shown as state top-filed on the land status map in Chapter 3. The state has selected these parcels and has long had interest in them. These parcels are surrounded by state land. In fact, between 1980 and 1986, the BLM worked on conveying the Point McIntyre site to the state under the Secretary of the Interior's "Good Neighbor Program." If these military withdrawals are no longer needed, these sites should be conveyed to the state. The BLM has not adequately evaluated the need to continue with these withdrawals and has not indicated if partial interests, such as oil and gas subsurface rights, can be conveyed to the state. The draft RMP should include an analysis of this issue in order for the reader to fully understand the state's concerns with the Preferred Alternative as it relates to state selections.

Oil and Gas Pipeline Map (page 4-9). The oil and gas pipeline map demonstrates the uncertainty involved in locating an east-west transportation line through the planning area. This map further demonstrates the futility in continuing to reserve the existing ANILCA Section 1431(j) corridor. The route shown as the

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"preferred pipeline route" avoids the land excluded from state selections described in the Preferred Alternative.

Subsistence Use Area Map #2. The legend reference for Stevens Village includes the citation "Sumida and Alexander 1986" but has no corresponding entry in the bibliography. We assume reference is being made to the report listed below.

Sumida, Valerie. in prep. Land and Resources Use Patterns in the Yukon Flats: Stevens Village. Alaska Department of Fish and Game, Division of Subsistence Technical Report Paper No. 129. Fairbanks.

3-5 Page J-36, Subsistence 810(a) Evaluation. Reference is made to "subsistence trapping." This term has not been defined for purposes of the trapping regulations, nor have "subsistence trapping" regulations been promulgated. This reference should be amended to state "trapping for subsistence purposes" or "trapping by local rural residents."

3-6 Page J-31, Subsistence Economy. The draft plan should point out in this section that the cumulative impacts of development in the Utility Corridor and CAMA area could result in changes to areas local communities use for subsistence purposes. Development could also affect wildlife migration patterns.

Response to comment letter No. 3 - State of Alaska

3-1
Although in Chapter 3, the "Affected Environment", we chose to incorporate much subsistence use information by reference rather than to discuss it at length, it is taken into consideration in our analyses (see Chapter 4).

3-2
We agree. An explanatory note had been prepared to appear on the maps but was inadvertently omitted. It has now been added to the subsistence use maps.

3-3
Without site specific and action-specific proposals it is not possible to describe site-specific and action specific mitigation. Each action on federal lands will involve NEPA compliance for site and action-specific events. It is at that time that mitigation for subsistence, if necessary, will be addressed. However, within this document we have developed generalized activity scenarios to facilitate our impact assessment. Given these generalized scenarios we do feel that BLM and the state, through its fish and game management responsibilities, have at their disposal the necessary tools to mitigate impacts to subsistence. Much of the mitigation from potential impacts to subsistence necessarily involves the state in establishing hunting and fishing regulations and subsequent enforcement.

There is no doubt that economic considerations could always take precedence over proposed ANILCA 810 mitigation (or any other proposed action for that matter). If, for example, the state lacks funding to appropriately manage fish and game resources on federal lands pursuant to the requirements of Title VIII of ANILCA, then proposed mitigation would not occur. However, given state and federal management responsibilities, forecasting of such economic considerations is not considered a legitimate issue for consideration in this document.

3-4
The lands within the Utility Corridor most susceptible to cumulative impacts to water quality from commercial, recreational and mineral development are located in the area immediately adjacent to the Dalton Highway. The majority of these lands are within the nonwilderness assessment area and are not being considered for wilderness designation. Furthermore, wilderness designation itself would have no direct impact on water quality. Land use decisions and resource allocations impacting water quality would more appropriately be considered within the context of a land use plan such as the final Utility Corridor Resource Management Plan.

3-5
We have changed the wording in the text to "trapping for subsistence purposes."

3-6
The preliminary final EIS does discuss potential impacts to subsistence use and use areas, but not in the affected environment chapter to which you refer. Possible impacts to subsistence use resulting from the proposed action are discussed in Chapter 4 under Impact Analysis of the Proposed Action—"Impacts on Subsistence Use Patterns". Also see Appendix C for the ANILCA 810 evaluations.

4

Northern Alaska Environmental Center
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BLM AK-975
[illegible] PM '87

November 30, 1987

Mr. Thomas Dean, Arctic District Manager
Attention: Dave Ruppert, Project Manager
Bureau of Land Management
Arctic District Office
1541 Gaffney Road
Fairbanks, Alaska 99703

Dear Mr. Ruppert:

The following are the comments of the Northern Alaska Environmental Center and the Alaska Center for the Environment on the draft Utility Corridor Resource Management Plan and Environmental Impact Statement. Generally, our organizations support a combination of the policies delineated in the environmental protection and enhancement alternative (Alternative B) and the Preferred Alternative. We feel that the Utility Corridor Lands and portions of the lands within the Central Arctic Management Area (CAMA) are national interest lands and, as such, deserve the best environmental protection possible consistent with the overriding goal of providing for energy transportation. Toward that end, we support the Management Goal defined for Alternative B which is to "maintain a stance of maximum sensitivity to parks and refuges adjacent to the corridor..." and "to limit actions which would have negative effects on water quality, air quality, viewshed, etc. or on adjacent Conservation System Units."

Several issues considered in the draft Resource Managment Plan (RMP) such as the CAMA wilderness study and the Alaska National Interest Lands Conservation Act (ANILCA) Section 1001 study, will require consideration and/or action by the U.S. Congress. Given this situation, it is appropriate for the Bureau of Land Management (BLM) to make recommendations in the final RMP which will also require congressional action.

4-1 Our organizations wholeheartedly urge the BLM to make a recommendation to the Congress to establish the entire Utility Corridor as a federal Conservation System Unit (CSU) with the Dalton Highway designated as a National Scenic Highway and the consolidated Oolamnagavik Block designated as wilderness.

The reasons supporting this action, many of which are documented in the draft RMP, include:

* To avoid actions or activities which would be potentially disruptive to transportation of energy resources important to the security and economic health of Alaska and the Nation.

(page 1)

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* To minimize actions or activities which would be potentially adverse to the values for which the adjacent National Conservation System Units were established.

* To protect the scenic and esthetic values of the only highway in the U.S. which crosses the Arctic Circle and provides access to the Brooks Range and North Slope.

* To maintain a consolidated pattern of Federal land ownership to simplify management, reduce operating costs, streamline administrative efficiency and improve responsiveness to National needs.

* To protect specific resource values including crucial wildlife habitat and important hunting/fishing/recreation use areas.

* To consider and minimize significant restrictions to rural subsistence uses and needs.

Many of the goals and policies included in both the Preferred Alternative and Alternative B can best be accomplished if the Corridor is established as a federal CSU and state land selections and federal homesite disposals are not allowed.

The state's land management record speaks for itself, despite whatever claims might be made by the Alaska Department of Natural Resources (DNR) about supposed benefits of state ownership. Despite continual objections from conservationists, the DNR has proceeded with land disposals in areas with sensitive wildlife habitat and scenic values immediately adjacent to Denali National Park and within the Wrangell-St. Elias National Preserve. 4-2 Recent strip development has devastated the viewshed of the Parks Highway adjacent to Denali National Park, yet the state has expressed no intention of taking management actions to "protect the values of the adjacent CSU." This cannot be allowed to occur in the narrow corridor between the Nation's two premier wilderness reserves, Gates of the Arctic National Park and the Arctic National Wildlife Refuge.

During the DNR's Dalton Highway Land Selection Study the state claimed that its intent is to acquire lands within the Corridor primarily for public recreational purposes and that outstanding areas such as Sukapak Mountain would be set aside as state parks. We at the Northern Alaska Environmental Center look at the DNR's Tanana Basin Area Plan which was recently completed in our own backyard to project what is likely to occur. At the completion of the Tanana Basin planning process which classified over 12 million acres of state for mineral development, a recommendation was made to designate two rivers in the planning area as State Recreation Rivers. Despite the best intentions of the DNR planners, the response from Interior Alaska state legislators was to propose a federal Wild River (Birch Creek) totally outside the planning area for designation as a "State Mining River." Even with the unfounded assumption that the state would manage the Utility Corridor for some

(page 2)

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type of public recreation other than allowing land disposals for condominium development, the Alaska Division of Parks and Outdoor Recreation simply does not have the budget to construct or maintain recreational facilities such as hiking trails, campgrounds and picnic areas. Existing State Park facilities in the Fairbanks area have recently been closed due to lack of funding and there is no reason to believe the situation will change within the life of the Utility Corridor Plan.

In nearly every instance where our organizations have urged the state to manage its lands to help protect adjacent federal CSUs, the State has taken the position that "ANILCA provided all the federal conservation protection needed in Alaska and anything outside the border of an existing CSU should be afforded no special protection whatsoever." Simply put, the state interest in Utility Corridor lands is not consistent with the federal interest and the values at stake are too great to allow state ownership.

Specific Comments

Forestry Resources - We support a total prohibition on commercial harvesting of timber. In determining the allowable cut of timber for personal use firewood and houselogs the BLM must recognize the fact that a very limited amount of timber can be cut at this latitude on a sustained yield basis. Timber harvesting must not be allowed to degrade visual resources of the Corridor or exceed the sustained yield in the local area.

Mineral Development - We support the mineral development policies defined in Actions B-1 and B-2. These policies can provide the best protection to fish and wildlife habitat and adjacent CSUs.

Development Nodes - Preferred Action 4 should be modified to include the elimination of the Chandalar Development Node along with the Prospect and Pump Station 3 Nodes. Ordinary safe travel distances do not require a development node at this site and the statement in the draft plan that "interest has been expressed in developing a service facility and lodge" does not provide adequate documentation for the need for facilities in this highly scenic area. Governmental units should not be allowed to construct facilities outside of the nodes with the single exception of energy transportation facilities. No permanent commercial facilities should be allowed outside of the nodes.

We oppose homesite land disposals at the Coldfoot and Yukon Crossing nodes due to the finding that a significant restriction of subsistence uses could occur due to sale of these lands. The Native villages of Stevens Village and Anaktuvuk Pass could suffer a great loss of subsistence opportunities from these proposed land sales.

The Coldfoot Node is much too long and provides an opportunity for strip development in this seven mile portion of the Brooks Range. With the elimination of the homesite sales and consolidating all truly needed

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facilities into a smaller area, this long "strip node" can be reduced.

The final plan should delineate specific criteria for all Federal Land Policy and Management Act (FLPMA) lease applications to protect the scenic qualities of the Corridor and avoid strip development.

Realty Actions - As previously stated, we oppose the transfer of lands within the corridor to the state. We support elimination of the split estate ownership patterns in the CAMA as long such land exchanges can enhance environmental protection. We urge the BLM to use high oil potential lands within the CAMA as trading stock to acquire state or Native inholdings within CSUs or to consolidate the Oolamnagavik Block. Any exchanges should be designed to ensure that the public receives full value for any surface or subsurface rights conveyed out of public ownership.

We strongly support Action B-10 which provides for consolidation of the Oolamnagavik Block for the purpose of protecting the riverine environment of the Killik River between Gates of the Arctic National Park and the Colville River.

We support the transfer of lands reserved for the Arctic Gas Line Corridor from the BLM to the U.S. Fish and Wildlife Service to be managed as a part of the Arctic National Wildlife Refuge.

Recreation - Generally, the recreational facility developments proposed in the Preferred Alternative may be reasonable over the life of the plan. It is our understanding that a detailed Recreation Activity Management Plan will be prepared following adoption of the RMP to delineate specific locations and designs for facilitites. We are primarily concerned that facilities not be placed in locations that would detract from the wilderness qualities of adjacent CSUs and that the BLM not become an agency to promote tourism. It is appropriate to provide minimal recreational facilities as they are needed and the BLM is the best agency to do so. We oppose development of permanent concession facilities at the Chandalar Shelf Node.

We support the existing "Limited Type 3" ORV classification which allows only snowmachines less than 600 pounds with adequate snow cover. The Visual Resource Management (VRM) classifications should be more protective with the Dalton Highway Unit being classified as "III" and the Dalton Corridor and Oolamnagavik Block classified as "11."

Access - We support the use of the Bettles Winter Road as the corridor for the access route to the Ambler Mining District. We concur with the concept of an ORV use study in the Corridor, however, the existing "Limited Type 3" classification should not be changed unless completion of the study demonstrates a need and justification for change. We support Preferred Action 15 to work cooperatively with the NPS and F&WS to identify appropriate access to adjacent federal lands. This process must include public involvement and recognize the management value of keeping access to designated wilderness difficult (i.e. we do not want to see recreational roads developed right up to the boundary of Gates of

4 continued

the Arctic National Park).

Subsistence - We support protection of the existing subsistence uses and opportunities within and adjacent to the Corridor. No actions should be allowed within the Corridor unless the ANILCA Section 810 evaluation demonstrates that no significant restrictions of subsistence uses will occur.

BLM should bear in mind that Gates of the Arctic National Park cannot support heavy harvesting of subsistence resources without jeopardizing the "natural and healthy" wildlife populations criteria the National Park Service must uphold. If new residents of the Coldfoot area are allowed to qualify as subsistence users through the resident zone system, it may directly impact the traditional subsistence uses of Anaktuvuk Pass.

Wilderness - The BLM should abolish the James Watt "no more wilderness" policy and review all lands for possible wilderness designation while in the land planning process. 4-3 We support adoption of the "Partial Wilderness Alternative" described in the CAMA Wilderness Study with the addition of the consolidated Oolamnagavik Block as defined in Action B-10. 4-4 Congressional designation of the Oolamnagavik Block as wilderness could include a provision for a utility corridor through the area to access the National Petroleum Reserve. This access could also be provided pursuent to Title XI of ANILCA, if needed.

Consolidation of the Oolamnagavik Block into a cohesive unit stretching from Gates of the Arctic to the Colville River and encompassing the Killik River ecosystem is an outstanding opportunity which should not be lost. We commend the BLM for developing such a proposal and urge that the State not be allowed to select the land before the Congress can act.

Wildlife Resources - We support the proposal to transplant musk-oxen to the Oolamnagavik Block and preparation of a Habitat Management Plan for the Colville River. We urge strong protection for fisheries and wildlife habitat on the Colville, particularly with regard to peregrine falcon and other raptor nesting areas and fish spawning and overwintering areas.

We support protection of wildlife and fisheries habitat from the adverse effects of mining as can be provided by Action B-1. It is crucial that all spawning grounds be protected from placer mining sedimentation and this can only be accomplished by closing sensitive streams to their headwaters.

We are strongly opposed to leasing Kanuti Hot Springs. The springs should be left in a natural condition for the use of wildlife and the public. If public recreational use creates conflicts with wildlife, such use should be limited.

Areas of Critical Environmental Concern - We support establishment of ACECs as provided in the Preferred Alternative with the extra protection

4 continued

from mineral development as defined in Action B-1.

Summary

We strongly support continued federal ownership of the Utility Corridor with emphasis on protecting the outstanding conservation values found within and adjacent to the corridor. Congress has set a precedent in Alaska in establishing a unique conservation area for a special purpose. The Steese National Conservation Area is the first example and the Utility Corridor should be the second. The Bureau of Land Management has done a good job in presenting the option of a unique conservation opportunity to the American people through the draft RMP. With these suggested revisions and some action by the Congress the Utility Corridor can provide energy resources and outstanding recreational opportunities for many years to come.

Sincerely,

Randy R. Rogers

Randy R. Rogers
Director of Conservation
Northern Alaska Environmental
Center

Stephanie Kessler /RB/

Stephanie Kessler
Executive Director
Alaska Center for the Environment
700 H Street, Suite 4
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Response to comment letter No. 4 - Alaska Center for the Environment and Northern Alaska Environmental Center

4-1
The new Oolamnagavik-Etivluk Alternative includes the entire Oolamnagavik block; see Chapter 2.

4-2
Most Utility Corridor lands adjacent to Gates of the Arctic National Park are outside of the wilderness study area described by ANILCA Sec. 1001 and thus are not being considered for wilderness designation as part of this study. Also, due to the presence of the Dalton Highway, TAPS and related facilities, those Utility Corridor lands that are within the Wilderness Study Area that are (roughly) visible from the Dalton Highway have been determined nonwilderness in character (U.S. DOI, BLM, 1980). These nonwilderness lands along the Dalton Highway are the only WSA lands likely to be in demand for commercial development. This nonwilderness area is several miles removed from Gates of the Arctic Park and ANWR at most locations. Development which is to be allowed in this area and the question of state or federal ownership are issues addressed in the Utility Corridor RMP. It is to be noted that state law prohibits land disposal 5 miles either side of the Dalton Highway.

4-3
We acknowledge your support of the partial wilderness alternative with the addition of the consolidated Oolamnagavik block and Killik River "acquisition area". In order to include all of the Oolamnagavik block lands in an alternative other than the all wilderness alternative, a new alternative, the Oolamnagavik-Etivluk Alternative, has been developed (see Chapter 2). However, inclusion in any wilderness alternative of the Killik River acquisition area described in action B-10 of the draft Utility Corridor RMP/EIS is considered outside the scope of this study as these lands are outside the WSA and not in federal ownership. As set forth in the draft Utility Corridor RMP/EIS, should the Killik River lands be acquired, multiple-use management would take into account the unique opportunities afforded by the region for primitive recreation and the status of adjacent lands.

4-4
ANILCA Title XI provisions are not considered to apply to conservation units that were not created or expanded by ANILCA [Ref. Sec. 1101 (c) of ANILCA]. However, for purposes of analysis under both the Partial and Oolamnagavik-Etivluk alternatives, pipeline access has been provided to NPR-A around the Oolamnagavik block.

5

BLM-AK-975
Dec 2 1 32 PM '87

Sierra Club
Alaska Field Office
241 E. Fifth Avenue, Suite 205, Anchorage, Alaska 99501, (907) 276-4048

December 1, 1987

Mr. Thomas Dean, Arctic District Manager
Attention: Mr. David Ruppert, Project Manager
Bureau of Land Management
Arctic District Office
1541 Gaffney Road
Fairbanks, Alaska 99703

Re: Utility Corridor - Draft Resource Management Plan/EIS

Dear Mr. Dean:

Although the Sierra Club does not support the Bureau's Preferred Alternative, we strongly support its key feature, which is the retention of Corridor lands in federal ownership. Such retention is essential for appropriate management of the Corridor's nationally significant wildlife, scenic, and recreation values, and for adequately buffering the three adjacent national conservation system units.

Ideally, Congress would ensure the permanent retention of Corridor lands in public ownership by designating the Corridor as a national recreation area under BLM jurisdiction. Otherwise, future national administrations might decide to open all or portions of the Corridor to State land selections. Although the Draft Plan recognizes the obvious advantages of having Congress permanently reserve the Corridor, the Plan falls short of including that option in any of the alternatives:

> Due to the special recreational opportunities afforded by the presence of the Dalton Highway it was proposed early in the planning process to recommend the Utility Corridor (from the Yukon River to Galbraith Lake) for special designation as a conservation unit. While the emphasis in this conservation unit would be energy transportation, a secondary emphasis would be placed on the development of public recreational opportunities and facilities. This recommendation to establish a conservation unit was not carried forward into the planning alternatives.

Please include in the Final Resource Management Plan an explanation for the failure to include the conservation unit option in at least one of the alternatives.

5 continued

Recommended Alternative

The Sierra club recommends the adoption of Alternative B, as modified and supplemented by the following provisions. These suggestions are also offered in order that Alternative B can better "... represent a program of environmental protection and enhancement." (p. iii).

1. Congressional designation. Alternative B as modified would include a recommendation for a National Conservation Area covering the Utility Corridor from the Yukon River to Sagwon Bluffs. A wilderness review would also be required.

2. Locatable minerals. All Corridor lands would be withdrawn from new entry and appropriation under the mining laws, and a leasing system incorporated in the proposed National Conservation Area. Until the Bureau can demonstrate an ability to effectively regulate existing mining operations, and thereby avoid or control the adverse effects listed in Table 4-4, opening additional Corridor lands to the operation of the 1872 Mining Law could simply compound the damage.

3. Development Nodes. The Chandalar Shelf node would be eliminated by Alternative B as modified in order to minimize the amount of development allowed in the Brooks Range portion of the Corridor. The Yukon Crossing and Coldfoot nodes would be drastically scaled back to a size necessary to accommodate existing and anticipated facilities for tourism, recreation, and other public purposes, and to avoid the creation of new communities. No homesite or other land sales for settlement purposes would be included; leases would be used for residential tracts needed in connection with public facilities.

Resolution of the illegal occupancy of federal land at Wiseman (or elsewhere in the Corridor) would not be through the sale of the occupied land, probably at nominal prices, as proposed in the Bureau's Preferred Alternative. Such sales send the wrong message to law-abiding citizens. Instead, Alternative B as modified would resolve the problem through short-term, renewable leases that would include payment for the use of the public land.

4. Opening lands for selection or exchange. Isolated tracts of public land not available for state selection would be used for exchange purposes, not made freely available for State selection as in the Preferred Alternative.

5-1 5. Consolidation of the Oolamnagavik Block/Killik River Acquisition. Alternative B as modified would take this sound proposal a step further by enlarging the Killik River Corridor to encompass the watershed and by proposing that Congress designate the river and its watershed as a wilderness area.

5 continued

Under the proposed Plan, the Killik would, if acquired, be "managed under multiple-use guidelines." This intent is contrary to the Bureau's own wild river study, which found the Killik to be fully qualified for inclusion in the National Wild and Scenic Rivers System. It is also inconsistent with Congress's action in setting aside the upper Killik as a wilderness river within Gates of the Arctic National Park. Had the lower Killik River watershed been in public ownership at the time of ANILCA, it would almost surely have been designated as a wild river.

6. Split Estates. Unlike the Preferred Alternative, Alternative B as modified would not dispose of publicly owned surface estate to an owner of the subsurface estate. Unless there are sand and gravel or other mineral deposits present, the owner of the subsurface estate is unlikely to seek access to, or disturb the surface estate. In the absence of recoverable resources, ownership of the subsurface estate, per se, is not an obstacle to managing the surface estate for public purposes.

For example, a large block of BLM "Surface Management Only" lands adjacent to the Itkillik Lake area (Gates of the Arctic National Preserve) should be managed to complement that of the adjacent preserve lands, and to protect more of the foothills physiographic zone. A possible exchange could be considered if the subsurface owner ever moves to the development stage. In the meantime, the surface estate should be retained and managed for public purposes.

7. Off-Road Vehicles. Alternative B as modified would permit the use of snowmachines for subsistence purposes by qualified local residents. Other ORV's would operate under permit for access to inholdings, in connection with valid mining or other mineral extraction, and of course if new pipelines or other facilities for the transportation of energy minerals become necessary. Recreational or noncommercial casual use of ORV's would be prohibited.

8. Areas of Critical Environmental Concern. Alternative B as modified would close the ACEC's to new mining claims, mineral leasing, and sand and gravel sales.

Other comments

On page 3-4 there is a reference to current negotiations involving possible land exchanges in CAMA. Please include a description of these proposed exchanges, and any others involving federal land in the planning area, in the Common Actions section of Chapter 2 of the Final Plan.

Thank you for this opportunity to comment on the proposed Resource Management Plan.

Sincerely,

Jack Hession

Jack Hession
Alaska Representative

Response to comment letter No. 5 - Sierra Club

5-1
See Response 4-3.

6

RECEIVED ARDO
ON 12/2/87
BY wmd
FOR Dean

THE WILDERNESS SOCIETY

November 30, 1987

Mr. M. Thomas Dean
Arctic District Manager
Bureau of Land Management
1541 Gaffney Rd.
Fairbanks, AK 99703-1399

Re: Utility Corridor Draft Resource Management Plan and Environmental Impact Statement

Dear Mr. Dean:

On behalf of its nearly 200,000 members nationwide, including over 1,100 in Alaska, The Wilderness Society welcomes the opportunity to comment on the Draft Environmental Impact Statement (DEIS) for the Utility Corridor Resource Management Plan and the Central Arctic Management Area (CAMA) Wilderness Study. This is an area of great scenic beauty, important wildlife habitat, and excellent recreational opportunities. It should be proposed for special protection and statutory recogniztion as a conservation system unit. The Bureau of Land Management (BLM) should not have dropped its consideration of such a proposal in the draft and should reinstate such a recommendation in the final plan.

The Wilderness Society commends BLM for recognizing the special resource values of the corridor and the increased public interest in recreational use of Utility Corridor lands. The agency is to be further commended for placing significant emphasis in the plan on appropriate access and recreational use of the area. However certain proposed actions, such as land disposals and mineral development, could compromise the natural, scenic, cultural, and recreational values of the corridor.

Sightseeing, overnight lodging, developed camping, interpretative services and fishing are among the appropriate recreational uses of the inner Corridor. The Wilderness Society recognizes the need for carefully planned facilities development, informational signs, interpretive facilities and seasonal staff for public education and land management.

ALASKA REGION
519 WEST 8TH AVENUE, SUITE 205 ANCHORAGE, ALASKA 99501
(907) 272-9453

6 continued

The Wilderness Society
Page 2

Backpacking, hunting, fishing, and river floating can all be enjoyed in the outer Corridor. The Society agrees with BLM that there should be no new recreational facility development in this area. In particular, the Society shares BLM's concern for reducing potential impacts from recreational facility development in primitive, semi-primitive motorized and primitive-traditional areas. The Society supports BLM's recommendation of no development in these areas.

Inadequate Wilderness Recommendation

6-1 The wilderness recommendation in the DEIS is wholly
inadequate: a mere one percent for CAMA and nothing for the
remainder of the corridor. A major stumbling block in the
planning and management of BLM lands in Alaska continues to
be former Interior Secretary James Watt's 1981 "no-more
wilderness" directive. The Wilderness Society urges the
6-2 Secretary to repeal this counterproductive and inappropriate
policy, so that BLM can consider the entire Utility Corridor
for wilderness designation. Special attention in this regard
should be given to the proposed areas of critical environmental concern (ACEC).

The Wilderness Society strongly supports inclusion in
the National Wilderness Preservation System of 486,000 acres
6-3 of CAMA lands, consisting of 1) the Glacier block, 2) the
Nigu Extension block, 3) the Oolamnagavik block, and 4) the
Your Creek block. In the DEIS, BLM has determined that each
of these areas provides outstanding opportunities for solitude and primitive recreation in pristine ecosystems, yet
fails to recommend wilderness designation for most of these
areas. State selection is inappropriately used to justify
this action, but the state may never be conveyed these lands
as it has selected 14 million acres over its entitlement.
6-4 The state should be encouraged to relinquish these selections.

Likewise, state selection is not sufficient justification to exclude all or part of the Nigu Extension block. Sharing a common boundary with Gates of the Arctic National Park and Preserve, as well as common resource values, this area's remoteness, pristine character, outstanding scenic qualities, varied terrain, and excellent wildlife habitat all substantiate its suitability for wilderness designation.

6-5 BLM justifies the ommission of the Oolamnagavik block on the basis of ANILCA Section 1431(j) which is intended to ensure a pipeline right-of-way through these lands for the Arctic Slope Regional Corporation (ASRC). There is nothing in this section, however, that mandates a right-of-way. Rather the section states that "the final alignment and location of all facilities across public lands shall be in

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6 continued

The Wilderness Society
Page 3

6-5 cont. the discretion of the Secretary." Furthermore, wilderness designation would not preclude construction of a pipeline if and when oil is discovered and an energy transportation system is contemplated. Title XI of ANILCA provides a process, including an EIS, for pipeline development, even through designated wilderness.

6-6 The Glacier block lies adjacent to outstanding designated wilderness in Gates of the Arctic National Park, and shares its natural values. The Glacier block wilderness offers accessible primitive wilderness for those people who cannot gain access to the Brooks Range by airplane. Elimination of the Chandalar Shelf development node will serve to protect the Glacier block. Furthermore, sufficient land is available on the east side of the Utility Corridor in this area to accommodate future energy transportation systems.

6-7 The Your Creek block was originally recommended for inclusion in Arctic National Wildlife Refuge. Both the Porcupine and Central Arctic Caribou Herds use this area, along with adjacent state land, and it may be an area of important genetic interchange between the two herds. In addition, this area boasts outstanding alpine scenery. It should be recommended for wilderness designation and/or for addition to the Arctic National Wildlife Refuge.

Development Nodes

The Wilderness Society supports the proposed elimination of the development nodes at Prospect Creek and Pump Station 3 and urges BLM not to develop a node at Chandalar Shelf. Though nodal development is a reasonable approach to management of the Utility Corridor, it must be undertaken with caution as the direct impacts from it are long-term and irreversible. Development of these areas is not vital to the maintenance of the Dalton Highway. Similarly, further development of Pump Station 3 is not necessary for the maintenance of TAPS. Elimination of the Prospect Creek development node would protect the fish habitat and recreation values of the Jim River. Finally, there is no well-documented need for a node at Chandalar Shelf, the superb scenery of which would be severely degraded by development.

Land Disposals

The Society agrees with BLM that it is in the national interest to consolidate land holdings to promote more efficient public land management. However, BLM should not indiscriminately dispose of land either to individuals or the state. The Society opposes homesite disposals at Coldfoot and Yukon Crossing. Any homesite development needed now or in the future can be better accommodated by lease or permit

6 continued

The Wilderness Society
Page 4

rather than by disposal, thus protecting the integrity of the federal estate.

As a general rule, BLM should not be seeking to dispose of any federal lands. However the agency may determine that it is in the national interest to convey certain lands. Such lands, if any, should only be conveyed by means of exchange for lands needed to ensure the wise management and protection of the federal lands, and particularly Alaska's conservation system units (CSU).

The Society supports the proposed acquisition of lands surrounding the Killik River in order to protect the riverine environment connecting Gates of the Arctic National Park and Preserve with the Colville River.

Mineral Leasing

The Society recommends the following areas be closed to mineral entry or leasing, as proposed in Actions B-1 and B-2:

1) the inner Corridor and the nonwilderness assessment area;

2) identified crucial wildlife habitat, such as lambing areas, mineral licks, anadromous fish spawning habitat and crucial moose and caribou habitat;

3) recommended wilderness areas, including the Oolamnagavik block, Your Creek block, Glacier block and Nigu Extension block;

4) the outer Corridor adjacent to Gates of the Arctic National Park and Preserve; and

5) watersheds that drain into Gates of the Arctic National Park and Preserve, Yukon Flats National Wildlife Refuge, Arctic National Wildlife Refuge, and Kanuti National Wildlife Refuge.

Use of Off-road Vehicles

The Society urges BLM to retain the current policy regarding off-road vehicle (ORV) use, which prohibits such activity within five miles of the Dalton Highway right-of-way, except in conjunction with petroleum development or for access to mining claims. The Society supports continued Limited Type 3 access on BLM Utility Corridor and CAMA lands and opposes relaxation of these standards.

Conclusion

To sum up, The Wilderness Society is pleased that BLM has chosen to emphasize recreation in planning for the

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6 continued

The Wilderness Society
Page 5

Utility Corridor, but the agency must exercise caution to ensure that the extraordinary scenic beauty and other natural and cultural resources are protected for the enjoyment of future generations. Among other things, it is critical that BLM work closely with the National Park Service and the Fish and Wildlife Service to protect the adjacent CSUs and to prevent the creation of zones of degradation around key access points. The agency should also consider establishment of a permit system to prevent overuse of the road and campsites which would ruin the very experience visitors seek.

The Wilderness Society looks forward to working closely with BLM to ensure the best possible management of the Utility Corridor and all the public lands.

Sincerely,

Susan Alexander
Regional Director

Response to comment letter No. 6 - Wilderness Society

6-1
After analysis of the many factors involved in determining wilderness suitability only the CAMA lands of the upper Nigu were determined as suitable for wilderness designation. Corridor lands south of 68 degrees north latitude are not within the purview of this study.

6-2
Much of the Utility Corridor (roughly that portion visible from the Dalton Highway) was removed from further wilderness consideration prior to the 1981 Secretarial directive through a wilderness assessment completed with public participation in 1980 (U.S. Department of the Interior, BLM, 1980).

Many of the proposed ACECs identified in the Utility Corridor RMP are within the area determined nonwilderness in character. Relevant and important resources are nevertheless appropriately and adequately protected without wilderness designation through ACEC designation and standard mitigation and stipulations.

6-3
We acknowledge your support of the Partial Wilderness Alternative. Also note that a new alternative has been developed, the Oolamnagavik-Etivluk Wilderness Alternative, which includes the entire Oolamnagavik block.

6-4
Valid state selections are valid existing rights which should not be ignored in determining a final wilderness recommendation. Sec. 1001 (f) of the Alaska National Interest Lands Conservation Act states, "Nothing in this Title [Title X of ANILCA] shall be construed as impeding, delaying, or otherwise affecting selection and conveyance of land to the State of Alaska pursuant to the Alaska Statehood Act.....". It should also be noted that "valid" state selections may not be in excess of the state's entitlement; currently top-filings on withdrawn or Native selected lands are tallied as existing state selections, yet these lands may not become available for conveyance to the state.

6-5
We assume your comments are in reference to the manageability discussion of the Oolamnagavik Block that appeared in Chapter 2 of the draft wilderness EIS. That discussion has been eliminated from this final Wilderness EIS. However, wilderness designation of the Oolamnagavik block would preclude pipelines other than as provided for by Sec 1431(j) of ANILCA; ANILCA Title XI provisions do not apply to conservation units not created by or expanded by ANILCA [Ref. Sec. 1101 (c) of ANILCA]. However, for purposes of analysis under both the Partial and Oolamnagavik-Etivluk alternatives, pipeline access has been provided to NPR-A around the Oolamnagavik block.

6-6
We have acknowledged the many attributes of the Glacier Block. However, in this portion of the Utility Corridor, the topography of the Brooks Range severely restricts potential pipeline routes. An alternative passage to the Atigun pass route of the Trans-Alaska Pipeline System is located within the Glacier Block. Lands to the east may not contain suitable passage over the Brooks Range. It is considered prudent to keep open all potential passages for pipelines etc. through the Brooks Range within the Utility Corridor.

6-7
We acknowledge the many natural attributes of the Your Creek Block and your support of wilderness designation for this area. The Your Creek Block is not recommended for wilderness designation in the final proposal; however, if the land should remain under BLM management, wildlife values will be protected through co-operative State of Alaska and BLM management.

7

ALASKA MINERS ASSOCIATION, INC.
501 W. Northern Lights Blvd., Suite 203 Anchorage, AK 99503 (907) 276-0347

November 30, 1987

Mr. Michael Penfold
State Director
Bureau of Land Management
701 C St., Box 13
Anchorage, AK 99577

The Alaska Miners Association supports a multiple use management program for the public lands within the corridor recognizing that multiple use plans first have to be compatible with the initial purpose for which the corridor was established. Because right of way needs are now defined the oil line and road in place and a gas line R/W issued the inner corridor should be reduced to about 1/4 mile.

Also there are other ways--rather than a formal withdrawal--to deal with spurious mining claims. Mineral development projects close to the Dalton Highway will create less impact than projects at a greater surface distance because of access road construction. It will also be much more efficient use of the mineral reserves to develop those close to existing access first.

We have elected not to take a position on State vs Federal Management if the final plan will recognize and present some analysis regarding transportation systems and if it will objectively evaluate all multiple use resource values.

The greatest problem with the plan and environmental impact statement is that not all resource values are treated in an equal manner. A multiple use agency must consider all values and begin its analysis and evaluation from the same base.

Minerals are part of the natural values occurring on public lands within the corridor. These occurrences are very rare, occupy very small acreages and are not mobile. There is no other alternative to a given mineral occurrence. These deposits are not like animal populations which are dynamic, adaptable and naturally cyclic.

One section of the analysis should address minerals from this perspective. What are the impacts of other uses and conflicts to produce from these few, rare and maybe very significant mineralized areas? What kind of mineral development scenarios are realistic and in view of existing Federal and State permitting authorities with attendant stipulations how are impacts mitigated or minimized?

7-1 The other failure in this analysis is to project future opportunities. With changing technology particularly advancement in computer sciences (micro chip development). New compounds are becoming important. The closure of any area decreases by some factor future availability of these elements. When evaluating minerals the discussion always focus's on the historic, past use and demands and past technology and never on the significance of new materials new mining methods and the future needs of civilization.

Because of this biased type of analysis one of the many values (minerals) of the lands within the corridor does not achieve a fair position in the selection of a resource management mix in the preferred alternative.

The preferred alternative assumes energy transportation systems are overriding function of the corridor then is seems to establish recreation as the dominate second use. The existence of the road--access--is the reason for the high value for recreation. This is also the reason along with the existence of mineralization that these lands are of interest to the mining industry. Access is a major cost factor in mineral development projects and the haul road solves part of that problem for those deposits located in close proximity.

In chapter 2-1 mineral material-it must be assumed if energy transportation systems are an overriding use in the corridor that material (gravel, rock, etc.) is essential to these projects. Based upon experience with the TAPS pipeline and haul road gravel pits, the best sites from a rehabilitation, visual impact and habitat improvement standpoint are in the flood plain above the active channel. These sites can be rehabilitated and generally result in a new pond or small lake contributing to waterfowl and habitat for some fur bearers and other species. A good example of this is the pit immediately south of Coldfoot on the west side of the haul road. An observer who does not have the history of the TAPS project would invariably assume this is a natural lake, its irregular shore line vegetated with willows and grass, and aquatic plants growing in the pond.

Other disturbed areas can also contribute, the black spruce, sphagnum moss vegetative sites when disturbed can be reclaimed by proper design and treatment to produce a willow sub-climax vegetative type recognized as being more productive for many wildlife species including moose. As a matter of fact fires are now let burn naturally in many areas of the State to accomplish this objective.

Discussions in the plan and EIS do not recognize mitigation measures and speak only to the negative impacts of mining, material removal, etc.

ENVIRONMENTAL CONSEQUENCES

On page 4-2 It should be recognized that many placer mines now recycle all water, there is no discharge, also some turbidity is acceptable by EPA and allowed under the permits. The inference in the discussion is that turbidity is all bad, techniques are not effective and the impact of turbidity cannot be mitigated--this is not accurate.

On this same page it should be pointed out that miners are required to rehabilitate annually. Thus disturbed areas (4 acres per year quoted as an average for each mine) begins a cycle of revegetation probably reaching a productive level use by moose and other species in maybe 10 years or less. Thus, there is only some percentage of the annually disturbed habitat, for the 699 acres (table 4-1 page 4-5) not available to wildlife. If a dense population is 1 moose for four sections then the 699 acres represents a loss of habitat of less than 1/4 moose for the entire corridor without considering the improvement of habitat as sterile black spruce is replaced by a more productive willow sub-climax. Looking quantitatively at the whole picture recognizing mitigation and recovery as shown by actual experience on the TAPS project the section (4-14) on moose impacts is in error.

On page 4-13 an unqualified statement is made on the loss of caribou habitat. This leads an uninformed reader to an erroneous conclusion. There is adequate experience with the TAPS project to evaluate the existing gravel pits, determine actual amount of habitat loss (many of these pits were not in caribou habitat) and convert this loss into a number of caribou--or impact on the herd. Of course this assumes full stocking of the habitat, but if such is not the case--probably so-- there is in reality no impact.

Behavior avoidance cannot be assumed to result in a loss of habitat because as stated in supporting studies behavioral responses vary by gender and since the male animals use the habitat close to the pipeline and are in effect not utilizing other habitat areas these other areas are left for the cows and calves and there is in realty no real loss of habitat.

On page 4-13-here again the analysis states that material sites or mining would cause directs loss of grizzly bear habitat. This can be qualified by analyzing the impacts of existing sites and mines as well as using data from the projections in table 4-1 page 4-5.

On page 4-13 Impacts on fur bearers-- proper design of material sites and even rehabilitation of mined areas creating more riparian sites can increase habitat for water dependent species--beaver, muskrat, etc.

Chapter 4 page 4-5 Fishery resource-This discussion misstates the effects of placer mining even in a worst case scenario. EPA and DEC regulations and the NPDES permits do not allow for the discharge from mining operations to exceed .2 ml per 1 settlible solids or a turbidity of 5 NTU over background. Recent research has established that where placer mining does disturb natural deposits of arsenic (these do not occur in all placer deposits) that these compound settle with the solids and can be controlled with the required settling ponds.

The statement concerning irretrievable commitment of resources is in error. If you look at the history of mining and the intense activity in the early 1900's which dropped off in the late 30's and did not pick up until the 70's compared to fishery production you can establish that mining historically even during peak production had no long term effects on fisheries. History does not support the statement concerning long term effects. Also remember placer mining in the early 1900's was not controlled by law or regulation.

This section (Fisheries) should be rewritten to accurately reflect modern technology and practices as well as evaluate the impacts of historic use.

Page 4-17 Visual Impacts

The existence of mines can add interest to an area from a standpoint of tourism. Visitors to Alaska are generally aware of the rich mining history and culture of the State and interested is seeing active gold mining. The plan should be built to accommodate this interest and make opportunities for visitors to view and understand the mineralization of the Brooks Range.

Page 4-18-Socioeconomic and Subsistence

Here again existing law and regulation prohibit the discharge of effluent that does not meet drinking water standards. Your analysis is just like saying that admitting people in the area is going to jeopardize wildlife because they will kill the animals illegally. You have to assume that the existing laws and

regulations will be enforced in order to equally evaluate all resources and uses.

LANDS TRANSFERS

Lands under BLM jurisdiction should not be transferred to either the NPS or F & WS other than through exchanges. This will maintain the acreage base of multiple use lands. Areas for BLM acquisition should include lands containing existing mining claims or other in holdings which are now complicating NPS or F & WS management areas of high mineral interest. This comment is applicable to the PLO 6607 corridor.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN:

The Alaska Miners Association makes the following recommendations:

First ACEC's are inappropriate for many of the areas designated because these areas can be managed under the Bureaus multiple use authorities. It is inappropriate to link an ACEC to wildlife habitat since the vegetative component of the ecosystem is dynamic and changes as plant successions evolve or natural wild fires occur. Appropriate ACES could be the:

1. Archaeological site at Galbraith Lake.
2. Kanuti Hot Springs.
3. A 40 areas or 160 areas subdivision around the mineral licks used by Dall Sheep.
4. Possibly specific research areas at Toolik.

Our comments on specific ACEC's if they are not dropped from the plan is as follows:

Galbraith Lake: Reduce the size of the area to include a corridor about 2 miles wide for the existing pipeline, road and proposed gas lines.

Nigu/Iteriak Rivers: Withdraw this proposed ADEC. The area is not unique or different from numerous other drainages on the north side of the Brooks Range. Many similar areas are already protected by National Parks Refuges or the NPRA withdrawal.

Sagwon Bluffs: This ADEC should be reduced to exclude a corridor for pipelines and the road.

7-2 Wilderness Proposal: While we have no specific concern on

7 continued

ALASKA MINERS ASSOCIATION, INC.

7-2 cont. the Wilderness proposal it does seem premature since there is a proposal to add this area into the National Park. It also seems odd for the Bureau to manage only one small less than three townships area--in the entire State as wilderness. This just sets up another management category and represents an added costs to administer.

Sincerely,

ALASKA MINERS ASSOCIATION, INC.

Curt McVee

Curtis McVee
Executive Director

Response to comment letter No. 7 - Alaska Miners Association

7-1
This issue is addressed in the final wilderness EIS, see Chapter 4 "Impacts to Locatable Mineral Development" under the various alternatives.

7-2
Although a proposal to transfer management of the recommended Nigu wilderness area to the National Park service has been considered, that proposal is no longer receiving consideration.

Designation of the Nigu Block as wilderness will not result in "another management category" as BLM currently has a wilderness management program. Costs of administering the area under wilderness designation should not increase appreciably from costs incurred through administration of the present "interim wilderness management" program.

8

BLM-AK-975
Nov 30 12 40 PM '87

Dinyee
P.O. Box 1372
Fairbanks, AK 99707-1372

November 23, 1987

Dave Ruppert, Utility Corridor Project Manager
BLM
Arctic District Office
1541 Gaffney Rd.
Fairbanks, AK 99703

Dear Dave:

Dinyee is writing to provide you with comments on the Draft Resource Management Plan and Environmental Impact Statement for the Utility Corridor. The Yukon Crossing was the site of a fish camp belonging to Stevens Village people. The illegal cat trains and Hickel Highway have set a precedent for what is happening with the current haul road. The Yukon Crossing is in the middle of a traditional subsistence area for Stevens Village people. Suddenly Pandora's Box was opened up for Stevens Village with the opening of the haul road. Newcomers were told to "come on down" with no education or respect shown for the permanent residents in the area. The resulting negative impacts were a inverse mirror image of the boom that the urban areas were experiencing as a result of the exploitation of resources from ruaral Alaska. So far the system hasn't worked for Stevens Village. Is it going to now??

Local people can take care of tourism. There are private lands available at the Crossing for any commercial needs that may arise in the future. Please allow the permanent residents of the area to make a living there. It is a basic human right.

Thank you very much for your time and consideration. Thank you for going to the villages and involving them in the process. Thank you for the sensitivity shown to their needs. Without this they may not make it.

Sincerely,

Cheryl Mayo

8 continued

Cheryl Mayo
President
Dinyee

cc: Mike Penfold, BLM State Director
Rep. Don Young
Sen. Frank Murkowski
Mike Welsh, Citizens Advisory Commission On Federal Areas

(continued)

8 continued

Comments on BLM Utility Corridor Management Plan

-- Strongly support Alternative B because it provides the most protection to the land and the fish and wildlife.

-- Page 1-1, #4, the sentence should be completed, "and nearby with resulting negative impacts" Increased recreation use unless monitored and managed properly can hurt greatly subsistence resources, fish & wildlife, and the overall quality of life for every living thing. We've seen this happen at the Dall River.

-- Page 2-5 states, "A systematic monitoring program will be established that will assess impacts of human uses on fisheries resources throughout the planning area." This should have been done for the Dall River a long time ago. Now the situation there has reached the critical stage as human use is now out of hand and apparently unmanageable. The access created by the haul road has caused this crisis.

-- Dall River watershed should be declared an Area of Critical Enviornmental Concern.

-- There is no need to expand the Yukon Crossing and Coldfoot Nodes. The nodes should include just the presently leased area. There is no reason to open a school at 7-mile. Also there is no need for potential homesite areas within the nodes neither through sales nor leases. BLM should not try to stimulate new communities for the taxpayers to support. People who come to work in these development nodes should be aware of what the situation is there. It is not a 'rose garden' and they shouldn't expect it. If they want that they can go elsewhere to live. To create a new community at the Crossing or Coldfoot will only hurt the neighboring communities who depend on the limited fish and game for their livelihood and limited state monies for community support. The existing local communites are having a hard enough time making it without new, BLM stimulated competion. More people moving in will damage tourism and recreation in the area also. Tourists want to see animals from the road, not a hunted out area crisscrossed by ORV trails. The utility corridor is just that and not an excuse for certain people to open up the country. The existing leases have enough land to provide living quarters for the people working there. It is a good idea to eliminate the development nodes at Pump Station 3 and Prospect Creek. The Chandalar Shelf development node should be eliminated also. There is no reason for it.

8 continued

-- The BLM does not need to stimulate and encourage an incorporated city at Coldfoot, therefore there is no need for disposing the land to the state. That was not the original intention when the development nodes were created. Commercial facilities are all that was intended and are all that are needed now. The heavy subsistence use in the area around the Yukon Crossing precludes the necessity of disposing the land in the planning area south of the Yukon River. Subsistence resources and the subsistence economy will be affected by the state gaining control there. The state has a very poor track record in managing land for subsistence. The entire Corridor should be kept in federal ownership with no lands made available for state selection.

-- interpretive signs and materials need to be developed to educate the public on the situation at the Dall River and the subsistence economy in general. The public must be educated to realize that protecting subsistence is not racist, but based on the government to government relationship that the tribes have with the federal government. The trespass, vandalism, waste, litter, overfishing, and enviornmental degradation are all happening because of the access created by the haul road. The Dall River is important to the local people not only for subsistence purposes but also for cultural reasons. To see it being destroyed has alarmed them greatly. Now the local people see lots of boats on the Yukon River carrying hunters from outside competing for scarce subsistence resources. Urban sport hunters in getting their moose take away subsistence jobs. In many cases they do not understand the subsistence economy. The villages have a very low standard of living and need the subsistence resources that outside hunters now have the easy access to compete for. The BLM must accept some of the responsiblity for this and attempt to educate the outside consumptive users.

-- ORV use is a threat to subsistence resources. There is really nobody to monitor it. There has been much abuse already. ORV management must realistically be designed to protect subsistence resources in an area where there is really no enforcement. Please retain the present limited type 3 ORV policy. ORV use policies can be modified around Wiseman for that village's use but need to be kept as is in the rest of the Corridor.

8-1 -- The Venetie Block should be classified as wilderness. It is wilderness

8 continued

8-1 cont. now and should be protected as such.

-- Watersheds draining into conservation units such as the Dall River into the Yukon Flats should be closed to mineral entry.

-- Support Action B-1.

-- Support Action B-2.

-- Strongly support Action B-4.

-- Support Action Action B-5.

-- Support Action B-10.

-- Strongly support Action B-12.

-- Strongly support Action B-13.

-- Strongly support Action B-20.

-- Moose populations are low in the planning area. No new access should be created which would stimulate new hunting activities by outsiders. The economy in the area depends upon moose for the local people to survive. BLM won't allow any more commercial leases at the Crossing because of the increased competition to the already existing business yet BLM does not consider the increased competion that it is bringing to the local subsistence industry. BLM has to begin to recognize subsistence as an industry too and try to protect it. There has been no educational or interpretive effort made so far to inform visitors about the situation along the haul road. There should be a visitor display area complete with signs and brochures at the Crossing to explain about subsistence and the Dall River. Why is BLM more sensitive to the needs of the newcomers and visitors to the area than to the local people who have been there always and who have done a good job of taking care of the land? BLM needs to consider the future generations in making their management decisions.

-- The Dall River should be added to the list of streams which contain regionally important fishery values. The BLM needs to assist the ADF&G in developing a permit entry fishery for the Dall River.

8 continued

-- The state 1974 trails inventory does not need to on the BLM existing access map. This is the state's folly and not any of BLM's concern.

-- Impacts to wildlife in the planning area are more than just the loss of habitat or disturbances. One of the greatest impacts to wildlife is the 'shoot everything that moves' attitude of the workers that are temporarily brought in to work in the mining and other commercial activities. This added hunting pressure affects subsistence resources greatly. In genereal the BLM understates the negative effects that various developmental and recreational activities have on the the subsistence economy and cultural resources such as the Dall River. Chapter 4 is woefully inadequate in this regard.

-- BLM needs to assess the damage to the fisheries caused by the introduction of toxic heavy metals and chemicals from mining operations.

-- Support the All Wilderness Alternative for the CAMA lands and Utility Corridor.

-- As BLM admits, "a significant restriction of subsistence uses under the Preferred Alternative could occur due to BLM's potential sale of lands within nodes at Yukon Crossing and Coldfoot". This should not be allowed to happen. Already the the subsistence industry is hurting badly and as stated, Stevens Village has an annual median family income of $6250. How can BLM justify further negative impacts on the local subsistence industries?

-- BLM states on Table 4-5, "although over harvesting in localized areas is a concern, the State of Alaska Depertrment of Fish and Game has authority to regulate sport and commercial fishing activities and should provide a level of control". Unfortunately this has not been the case as is evidenced by the Dall River. There has been no ADF&G management there to provide any control over the overharvesting by sport fishing. Understandably, how is ADF&G going to control it without a budget that would allow for some kind of monitoring to be done. A permit entry system for remote fisheries such as the Dall River is what is needed. The BLM should work with the ADF&G to develop one.

-- BLM's conclusion on page 4-42 that "Alternatives A, B and D clearly would not cause a significant restriction on subsistence uses" is not correct. Land sales within the nodes, larger node sizes, increased sport

8 continued

hunting and fishing, and increased mining activity will all significantly restrict subsistence uses.

Response to comment letter No. 8 - Dinyee

8-1
The Venetie Block is not part of the CAMA Wilderness Study Area as created by Congress and defined in Secs. 1001 and 1004 of the Alaska National Interest Lands Conservation Act of 1980. Therefore, it is not considered for wilderness designation as part of this wilderness study.

9

(Typed for Reproduction Purpose)

11/5/87

Mr. M. Thomas Dean
Arctic District Manager
Bureau of Land Management
1541 Gaffney Road
Fairbanks, AK 99703

Dear Mr. Dean:

Yes, I have a comment about the Utility Corridor Draft Resource Management Plan and Environmental Impact Statement that the BLM-Arctic District published on August 18, 1987.

I think that: I testified at the Utility Corridor draft Management Plan, Subsistence Hearing, but wanted to have my written comments in also. I am not in favor of such a large node in the Coldfoot area. I strongly feel that the node should be kept from Slate Cr. south in the proposed configuration. As a subsistence user of wood cutting, trapping, and berrypicking some of our most used areas lay north of Slate Cr. My proposed node size would facilitate any further development in the area, which is all that's needed. I am not in favor of the state having any selections in the corridor, including the coldfoot node. Residential sales of lands within the node area should only be made on a restricted basis.

I also think that the Nugget Cr. ACEC should be extended along the west side of the middle fork north to the mouth of the Deitrich River. The area across the river from Sukakpak is heavily used as a lambing area by sheep. More so than the Nugget Cr. ACEC area.

9–1 I feel the Nigu area should be wilderness, but managed under a Park Preserve type status . I would like to see continued aircraft access for hunting, which we have lost in the "Gates" Park, for meat hunting.

I of course, agree with continuing with the sale of the resident cabin sites in Wiseman, as we have anxiously waited for years. Snow machines and threewheelers are very important to our subsistence access, and should be provided for. Thanks for listening.

P.S. I would like a transcript of the subsistence hearing held in Coldfoot, October 12, 1987.

Jack Reakoff
(Printed Name)

Wiseman, AK 99701-99998
(Address: P.O. Box town, state, zip code)

Self
(Agency represented, or self

Response to comment letter No. 9 - Jack Reakoff

9-1
BLM wilderness management of the Nigu Block would not preclude aircraft access for hunting.

10

BLM-AK-020
Nov 18 1 24 PM '87

2136 E. 37th St., #C
Anchorage, AK 99508
Nov. 13, 1987

Bureau of Land Management
Arctic District Office
Mr. Dave Ruppert, Project Director
1541 Gaffney Road
Fairbanks, AK 99703

Dear Mr . Ruppert,

I would like to offer some comments on the draft Resource management plan and EIS for the Utility Corridor through the Brooks Range. One of the most important issues this plan addresses is access to the adjacent lands. Once the road is opened up to public access, and people start fishing, hunting and recreating in greater numbers the potential exists for impacts to resources. I do not believe the EIS adequately addresses this question. I am also confused: who controls access on the road, the State of Alaska or the federal government? There definitely needs to be close cooperative planning between the BLM and the other adjacent conservation unit management agencies (the National Park Service and the Fish and Wildlife Service) to ensure that resources are protected in the adjacent conservation units.

The management goal of the BLM's preferred alternative is to both provide for energy transportation and provide for recreational opportunities. However, several of the management actions do not seem to be consistent with this goal. Specifically, the BLM is proposing to dispose of lands within the corridor for state selection. Allowing additional development within the corridor may impact adjacent federal lands, and allowing commercial development may preclude recreational opportunities. If any federal lands are to be disposed of, they should be by land exchange and not by selection. The BLM proposed 13 Areas of Critical Environmental Concern in the preferred alternative, recognizing their important resource values (e.g., salt lick sites, hot springs, lambing areas, peregrine falcon habitat). However, at the same time the BLM would permit developments such as mining. This appears to be contradictory to protecting these area's "critical environmental concerns." Whenever development occurs there will be impacts to adjacent resources, regardless of the degree of mitigation provided. All of the proposed ACEC's should be closed to development. Finally, the preferred alternative does not propose sufficent land for wilderness: although virtually all of the Central Arctic Management Area was determined to be suitable for wilderness designation, only the upper Nigu River area was recommended for wilderness. This action does not recognize the wilderness recreational opportunities in the CAMA. The BLM should instead propose the wilderness recommendation in Alternative B: the entire CAMA should be proposed for wilderness, with the exception of the nonwilderness assessment area. As the BLM notes on page 2-38, this action would provide maximum protection to wildlife resources within the CAMA. 10-1

Thank you for your time.

Sincerely,
Michael Rees
Michael Rees

P.S. One last point I forgot to make. I support including the BLM land in the Gas Arctic Corridor, about 325,00 acres surrounded by the Arctic National Wildlife Refuge, under the management of the Fish and Wildlife Service--this land should be made part of the surrounding refuge.

Response to comment letter No. 10 - Michael Rees

10-1
We acknowledge your preference for the all wilderness alternative and have considered this in making our final recommendation. However, it is not true that virtually all of CAMA was determined suitable for wilderness designation. What is true is that Congress designated all of the federal lands within CAMA as a wilderness study area and required a review of the area's wilderness characteristics. Final wilderness suitability determinations are based on many factors such as recreational opportunities, wildlife values, and other multiple resource benefits. Recommendations as to the area's suitability or nonsuitability for wilderness designation are submitted to the President and Congress. Only Congress can designate lands as wilderness.

11

BLM-AK-975
Nov 23 1 28 PM '87

November 14. 1987
Box 80
Venetie. Alaska 99781

Bureau of Land Management
Arctic District Office
Project Director: Dave Ruppert
1541 Gaffney Road
Fairbanks. Alaska 99703

Dear Mr. Ruppert.

We are writing to comment on the BLM Utility Corridor Draft Resource Management Plan and Environmental Impact Statement. We live in Venetie which is adjacent to some of the land this plan affects. The native people who live here rely on subsistence for much of their food needs. Oil. gas, and mineral development are not compatible with maintaining quality wildlife resources.

We believe that:

11-1 * All corridor lands should be considered for wilderness designation.

* Conveyence of BLM land to the state should occur only through land exchange.

* The BLM should cooperatively plan with the Fish and Wildlife Service and the National Park Service to ensure protection of adjacent conservation units.

* Areas of Critical Environmental Concern should be closed to oil. gas. and mineral development.

11-2 * The Department of Interior should abolish the 1981 James Watt "no more wilderness" directive. Along with this move. the 13 proposed ACEC's should be designated as wilderness.

* We would like to be kept informed on this issue. Please send us all copies of all drafts and reports related to this plan.

Thank you for your consideration.

Sincerely,

Chris Scranton
Pam Scranton

Chris Scranton
Pam Scranton

Response to comment letter No. 11 - Pam and Chris Scranton

11-1
Utility Corridor lands south of 68 degrees north latitude are not within the ANILCA mandated wilderness study area and therefore are not within the purview of this wilderness study. Some corridor lands north of 68 have been determined nonwilderness in character (see answer 6-2).

11-2
See answer 6-2.

12

(Typed for Reproduction Purposes)

November 22, 1987

Mr. Ruppert:

I would like to take this opportunity to make a few comments on BLM's Utility Corridor Draft Resource Management Plan:

1. I support a mix of Environmental Enhancement Alternative (Alternative B) and the Preferred Alternative, along with some recommendations which will require future congressional action. I will detail these recommendations at a future date.

2. The Utility Corridor lands are national interest lands and should be administratively managed and congressionally established as a special Conservation System Unit. The entire Corridor should be kept in federal ownership with no lands made available for state selection.

3. I support the Preferred Alternative's recommendation to eliminate development nodes at Pump Station 3 and Prospect Creek. I would also encourage the elimination of the Chandalar Shelf development node due to lack of any well documented need for development in the area. I oppose homesite disposals within the Coldfoot and Yukon Crossing development nodes due to the finding that these disposals may cause a significant restriction of subsistence opportunities to existing rural residents. Development should only be allowed within the defined nodes and only under federal leases.

4. I urge the adoption of the mineral development policies defined in Alternative B (Actions B-1 and B-2) which provide for mineral closures in crucial wildlife habitat, watersheds draining into adjacent CSUs and recommended wilderness areas.

5. I strongly support Action B-10 which provides consolidation of land ownership patterns in the CAMA. In particular, I support the consolidation of the Oolamnagavik Block to form a contiguous block of federal land connecting Gates of the Arctic National Park and the Colville River for the purpose of protecting the riverine environment of the Killik River and adjacent areas.

12-1 6. I support adoption of the "Partial Wilderness Alternative" included in the CAMA Wilderness Study. Additionally, I would recommend wilderness designation of the consolidated Oolamnagivik Block with a provision to allow a utility corridor through the area if needed in the future.

7. Finally, I would encourage retention of the present "Limited Type 3" Off-Road Vehicle policy which allows only snowmachines less than 600 pounds with adequate snow cover.

Thank you for accepting these comments and recommendations.

Sincerely,
Don Soileau

Response to comment letter No. 12 - Don Soileau

12-1
See answers 4-3 and 4-4.

13

November 24, 1987

P.O. Box 431
Northway, Alaska 99764

Dave Ruppert, Utility Corridor Project Manager
Bureau of Land Management
Arctic District Office
1541 Gaffney Road
Fairbanks, Alaska 99703

BLM-AK-975
NOV 27 1 29 PM '87

Dear Mr. Ruppert,

As you are coordinating the review of comments about the Central Artic Management Area (CAMA) which includes the Utility Corridor between the Yukon River and Prudoe Bay, I would like to express my thoughts about the future of the area.

As the Utility Corridor lands are in fact national interest lands, I believe that they should be retained under federal ownership rather than made available for dispersal by the State of Alaska for private purposes. More in keeping with the management of the surrounding National Park and Refuges the corridor would best be managed as a special Conservation System Unit.

There are certain features of the Utility Corridor Draft Resource Plan on which I would like to comment:

1) First, I support the Preferred Alternative's recommendation to eliminate development nodes at Pump Station 3, at Prospect Creek, and at Chandalar Shelf, mainly because there is no evidence that their development is needed at this time.

2) Subsistence usage by local residents near the Coldfoot and Yukon Crossing areas should be protected. Therefore, I do not support opening up land along the corridor for homesites.

3) I support Action B-10 which promotes the consolidation of land ownership patterns in CAMA. Specifically, I would support the consolidation of the Oolamnagavik Block to form a contiguous block of federal land. This action would encourage protection for the Killik River and adjacent areas by connecting the Gates of the Arctic Park with the Colville River.

13-1 4) I agree with the 'Partial Wilderness Alternative' in the CAMA Wilderness Study. I urge that the Oolamnagavik Block be designated as wilderness. A utility corridor could be allowed in the future if a need arises.

5) I do not support the allowance of mineral development in watersheds which drain into Conservation Units and critical habitat areas.

It would be a shame to jeopardize the ecological richness encompassed within the Gates of the Arctic National Park, the Arctic National Wildlife Refuge, and the adjacent refuges by neglecting the managment of the Utility Corridor. Wise management should include attention to the entire area, and keeping the wildlife values which are already shown before depreciating the values by disposing land too hastily.

Thank you for reading my comments. Good luck in your efforts.

Sincerely,

Chris Selin Standley

Chris Selin Standley

Response to comment letter No. 13 - Chris Standley

13-1
See answers 4-3 and 4-4.

14

BLM-AK-975
Nov 30 12 37 PM '87

Box 84218
Fairbanks, Ak.
November 25, 1987

Dave Ruppert
Bureau of Land Management
Arctic District Office
1541 Gaffney Road
Fairbanks, Ak. 99703

Dear Mr. Ruppert:

The following are my comments on the Draft Management Plan for the Utility Corridor and Central Arctic Management Area. In general I support the Preferred Alternative that you are proposing, although with a number of changes. I think it would be best if I were to list the Actions that I disagree with or have suggestions for improvements. If I do not mention the Action of the Preferred Alternative then it can be taken for granted that I agree with the action.

Preferred Action #1 - I would like to see all ACEC's added to the exception and adopt the Actions of B-1 and B-2 of Alternative B. I would also like to see a setback corridor for mineral entry along the Chandalar River, which

14 continued

is located on the very eastern edge of the Venetie block. This setback corridor should be 300 on each shore. Any new wilderness areas should also be closed to mineral entry.

My above suggestions address Action #2

Action #4 - I am for the maintenance of the present development nodes but not for the development of facilities that do not already exist. Yukon Crossing and Coldfoot are the nodes that should be maintained, not Chandalar or Happy Valley where facilities are not in operation at the present time. I am also not in favor of land disposals at Yukon Crossing or Coldfoot because of impacts or conflicts with subsistence lifestyle or opportunities that could occur.

Action #8 - I am not in favor of these land disposals or exchanges of land adjacent to the Arctic National Wildlife Refuge; these adjacent lands should be managed along similar guidelines of the refuge before exchanged or disposed of. This also addresses the question of Action #9, in which I am

14 continued

in favor of BLM retaining lands adjacent to ANWR to be managed along the same guidelines as ANWR.

14-1 Action #10 I am for the acquisition of land surrounding the Killik River along wit. consolidating this acquisition with the Oolam-nagavik block for the purpose of designat this acquistion and consolidation for wildern along with the Nigu designation which is already proposed.

Action #11 - I am for the acquisition of subsurface estates and against the disposa of subsurface estates to ASRC.

14-2 Action #12 - Concerning my proposed Oolamnagavik and Killik River block as wilderness, I would want this wilderness area as a non-motorized wilderness area. The other recreational management areas I would like to see the ORV use changed from type 2 to type 3. I am also in favor of the five mile limitation of ORVs along the Dalton Hwy.

14-3 Action #19 - Also recommend for wilderness designation the Oolamnagavik

14 continued

14-3 cont. and Killik River consolidation.

Action #21 - Also implement B-24 of Alternat B.

Action #22 - Replace this with B-22 of Alternative B.

Action #24 - Replace this with B-25 of Alternative B.

Action #25 - Also add restrictions of no camp grounds or recreational facilities allowed along with no mineral entry.

To summarize I want to restate some main points, mainly, that I am not in favor of land exchanges as with the State of Alaska that Alternative D proposes, any land disposals that will jeopardize the subsistence values of the area any more tha the increase in recreation will cause, and that I am for the addition of areas to be designated as Wilderness as I have proposed, no new development nodes to be established, mineral closure to ACEC.

14 continued

and the management of Utility Corridor lands, adjacent to already established National Parks and Refuges, to be similar to the guidelines and management purposes of these refuges and parks.

I would also like to thank you for the opportunity to comment on this Draft for a management plan.

Sincerely,

Mike Sterling
Mike Sterling

Response to comment letter No. 14 - Mike Sterling

14-1
See answer 4-3.

14-2
Sec. 1110 of the Alaska National Interest Lands Conservation Act provides for the use of snowmachines (during periods of adequate snow cover), motorboats, airplanes....for traditional activities and for travel to and from villages and homesites on lands that were designated as wilderness study. Subject to reasonable regulations to protect the natural and other values of the area, such activities will not be prohibited.

14-3
See answer 4-3.

15

BLM-AK-975
DEC 2 1 33 PM '87

November 29, 1987
Dave Ruppert, Utility Corridor Project Manager
Bureau of Land Management
Arctic District Office
1541 Gaffney Road
Fairbanks, Alaska 99703

Dear Mr Ruppert:

I am commenting on the Utility Corridor Draft Management Plan and Environmental Impact Statement with the Wilderness Study Supplement for the Central Arctic Management Area (CAMA).

Reviewing the alternatives presented, I support the actions recommended under Alternative B. The preferred alternative's recommendation to eliminate development at Pump Station 3 and Prospect Creek will remove activity from areas that are sensitive to environmental impacts and are not needed. I also encourage the elimination of the Chandalar Shelf development node due to lack of well defined "need for development".

Alternative "B" stresses environment protection and the utility aspect of the corridor. It does not stress the recreational aspect that is emphasized in the preferred alternative. The BLM should not manage these lands as a recreational area. I do not want to see the same kind of strip development that is happening at Denali occur along the corridor. Refuges border both sides of the corridor. The integrity of these refuges should not be jeopardized by inappropriate activities. Activities that alter water quality, degradation of flora and access by wheeled vehicles should not be allowed near sensitive wildlife and flora habitat.

The mineral development policies defined in Alternative "B" should be adopted in the final plan. Actions B-1 and B-2 provide mineral closures in crucial wildlife habitat and watershed drainage that are adjacent to conservation system units (CSU) and recommended wilderness areas.

Realty Actions

The effort that BLM is making to resolve the unauthorized occupancies in Wiseman seems inappropriate. If the occupation is unauthorized then the BLM should treat it as such and offer no land sale/exchange. The offer of land sale inducements to move gives recognition to the land rights. If the BLM recognizes these rights then the occupancies should not be moved.

15 continued

Off Road Vehicle Access

All areas within the plan should be closed to ORV use. The only exception for ORV use should be limited to activity in conjunction with oil and gas development or for access to mining claims. All access to federal lands should be limited to traditional methods. Such methods include snowmachine, fly in, and walking.

Bettles to Dalton Highway Ambler Right Of Way

The State has not shown a need to develop access to this area. Designation as a transportation corridor should not be made until the State establishes a need, commits to upgrading the existing road to an all weather road and maintains this road during the winter. This area should remain under the management of the BLM.

Colville River

The BLM has stressed the wildlife and habitat importance of this area. The Colville River area contains 80% of the active nesting pairs of arctic peregrine falcons. The Colville River provides valuable habitat for wildlife species that include caribou, grizzly, gyrfalcon, rough legged hawks, canada geese and countless number of other water fowl. This area should have the protection afforded under Area of Critical Environmental Concern (ACEC) protection. Protection of this area is critical to the survival of the arctic peregrine falcon.

Research Natural Area

Because of the uniqueness of the area this plan covers I am surprised to find so few areas consider as RNA's. BLM should consider the addition of other areas that represent the range and diversity of land forms and biological components of the environment.

Central Arctic MAnagement Area Wilderness Study Area

15-1 The changing size and configuration of the existing Central Arctic Management Area Wilderness Study Area (CAMA WSA) creates problems in determining the suitability of wilderness designation. It is unfortunate that the BLM has decided on an alternative that recommends so little of this area as wilderness. I have spent a good deal of time in the Gates of the Arctic region. I spent most of this time walking and climbing the mountains that make up the heart of the Gates. Every vista that I beheld spoke of the unique nature of this land. To measure its wilderness qualities against criteria of nearness to population centers and geographic distribution makes little sense when wilderness benefits the society as a whole. The BLM should adopt the all-wilderness alternative. The difficulty of managing a wilderness area should not preclude its determination as a

15 continued

15-1 cont. wilderness. Only Congress can designate wilderness.

15-2 Wilderness recommendation should be made for the Oolamnagavik block with a allowance for a utility corridor through the area if needed in the future. This area is high in wildlife and habitat, and should not be left out of wilderness considerations.

As the final adoption plan for the Utility Corridor, the BLM should manage these lands as set out in the alternative "B" option. Recreational activities should be deemphasized. Lands within the Corridor should be kept within federal ownership.

Thank you for allowing me to comment on this Draft Resource Management Plan and Environmental Impact Statement.

Sincerely,

Chris S. T. Kent
P.O. Box 20571
Juneau, Alaska 99802
(907) 465-4500

Response to comment letter No. 15 - Chris Kent

15-1
We acknowledge your support of the All Wilderness Alternative. However, while it is true that only Congress can designate wilderness, BLM was charged with the responsibility of reviewing the wilderness characteristics of the CAMA WSA lands and to make its recommendations to Congress. Manageability is an important consideration in making this recommendation (see answer 6-4).

15-2
The Oolamnagavik block has not been omitted from wilderness consideration. It has been included in part or in whole in the Partial Wilderness and All Wilderness alternatives and a new alternative, the Oolamnagavik-Etivluk Wilderness Alternative (see Chapter 2), includes the entire Oolamnagavik block. In both the Partial and the Oolamnagavik-Etivluk Wilderness alternatives, analysis assumes pipeline access to NPR-A could be routed around the Oolamnagavik block.

16

Thanksgiving Day
November 26, 1987

ALAN L WHITE
PO BOX 596
SAN CLEMENTE CA 92672

BLM-AK-975
DEC 2 1 31 PM '87

Dave Ruppert, Utility Corridor Project Manager
Bureau of Land Management
Artic District Office
1541 Gaffney Road
Fairbanks, Alaska 99703

Dear Mr. Ruppert:

As an occasional visitor to the Brooks Range and northern Alaska, I am very concerned about this land and the well-being of its present inhabitants. I am also somewhat upset by the state of Alaska's push for acquisition of all the corridor lands from the Yukon River northwards.

Please give the greatest possible weight to the following comments on your draft plan for the Central Arctic Management Area(CAMA).

The Utility Corridor lands are in fact national interest lands and should be administratively managed and congressionally established as a special Conservation System Unit. THE ENTIRE CORRIDOR SHOULD BE KEPT IN FEDERAL OWNERSHIP WITH NO LANDS MADE AVAILABLE FOR STATE SELECTION. Future congressional action should include designation of the Haul Road(Dalton Highway) as a National Scenic Highway with provisions to protect the natural character of the land.

As the Preferred Alternative recommends, eliminate development nodes at Pump Station 3 and Prospect Creek. Eliminate Chandalar Shelf development node also, due to lack of any well documented need for development in the area. No homesite disposals within the Coldfoot and Yukon Crossing development nodes due to the finding that these disposals may cause a significant restriction of subsistence opportunites to existing rural residents. Development should only be allowed within the defined nodes and only under federal leases.

I would urge adoption of the mineral development policies defined in Alternative B(Actions B-1 and B-2) which provide for mineral closures in crucial wildlife habitat, watersheds draining into adjacent CSUs and recommended wilderness areas.

Action B-10 is also extremely important, as it provides consolidation of land ownership patterns in the CAMA. The Oolamnagavik Block should be consolidated to form a contiguous block of federal land connecting Gates of the Arctic National Park and the Colville River for the purpose of protectecting the riverine environment of the Killik River and adjacent areas.

16-1 The "Partial Wilderness Alternative" adoption should be included in the CAMA Wilderness Study. Also, designate as wilderness the consolidated Ookamnagavik Block with a provision to allow a utility corridor through the area if needed in the future. Unfortunately, allowance of this corridor is necessary to make this wilderness recommendation realistically feasible.

16 continued

"Limited Type 3" Off-Road Vehicle policy which allows only snowmachines less than 600 pounds with adequate snow cover, -must also be retained.

Generally, I am supporting a mix of Environmental Enhancement Alternative (Alternative B) and the Preferred Alternative with some recommendations that require future congressional action.

Your own responsibility, Mr. Ruppert, in attending to these comments is greatly appreciated. I am,

Sincerely yours,

Alan White

Alan L. White

Response to comment letter No. 16 - Alan White

16-1
See answers 4-3 and 4-4.

17

BLM-AK-975
DEC 2 1 33 PM '87

Dave Ruppert, Utility Corridor Project Manager
Bureau of Land Management
Arctic District Office
1541 Gaffney Road
Fairbanks, Alaska 99703

November 30, 1987

Dear Mr. Ruppert:

The following are my comments regarding the Utility Corridor Draft Resource Management Plan recently released by BLM.

As a resident of Alaska, I urge you to keep in federal ownership all the lands in the Utility Corridor, with no lands made available for state selection. We Alaskans already have enough examples of state mismanagement of public lands, and I do not feel we need to place more Arctic acreage in the hands of the state. The lands in the Utility Corridor and CAMA are indeed national interest lands; I would like to see BLM recommend to Congress that the Haul Road be designated as a National Scenic Highway. I also would like to encourage BLM to retain the present "Limited Type 3" Off-Road Vehicle policy, allowing only snowmachines less than 600 pounds with adequate snow cover. There are millions of other acres in Alaska open to unrestricted off-road use.

I support the Preferred Alternative's recommendation to eliminate development nodes at Pump Station 3 and Prospect Creek. However, I also feel that the Chandalar Shelf development node could be eliminated as well, since there has been no documented need for development in the area. Development should be allowed only within the defined nodes, and only under federal leases. In my opinion, there should be NO homesite disposals within the Coldfoot and Yukon Crossing development nodes because of potentially significant restriction of existing subsistence uses by rural residents.

I strongly support Action B-10, providing for consolidated land ownership patterns in the CAMA. I would very much like to see consolidation of the Oolamnagavik Block to form a contiguous block of federal land connecting Gates of the Arctic National Park and the Colville River. Such consolidation would greatly aid in the protection of the riverine environments of the Killik River and adjacent areas. 17-1 I strongly advocate that BLM recommend wilderness designation for the consolidated Oolamnagavik Block. I also support adoption of the Partial Wilderness Alternative in the CAMA Wilderness Study.

Regarding mineral development, I urge you to adopt Actions B-1 and B-2 as defined in Alternative B. Mineral closures in crucial wildlife habitat, watersheds draining into adjacent Conservation System Units, and recommended wilderness areas is a must, in my view. It is only through such closures that Alaskans can be

17 continued

reasonably certain that the majority of their natural resources are not squandered for short term economic gains to the minority.

Thank you for this opportunity to comment on the Utility Corridor Draft Resource Management Plan.

Sincerely,

Larry Sutton

Larry Sutton
P.O. Box 84663
Fairbanks, AK 99708

Response to comment letter No. 17 - Larry Sutton

17-1
See answer 4-3

18

November 28, 1987

Mr. Dave Ruppert
Utility Corridor Project Manager
Arctic District Office
U.S. Bureau of Land Management
1541 Gaffney Road
Fairbanks, Alaska 99703

Dear Mr. Ruppert:

This letter contains my comments and recommendations in response to your Utility Corridor Draft Resource Management Plan. Please consider my input and include this letter in the appropriate public record.

At the outset, I believe that all Americans have a stake in the future management of this utility corridor, because it encompasses the only U.S. road which traverses the Arctic Circle and the Brooks Range. The adjoining natural values are magnificent and serve the national interest. Compatible management would be consistent with the national interest. Incompatible management would jeopardize the national interest, conflict with sensitive resource values, and threaten the integrity of nearby national parks and refuges.

I am distressed and appalled with the State of Alaska's work to acquire all of the corridor lands from the Yukon River north. The State's assurances that it will adequately protect these lands are illusory. The State's record demonstrates that it will proceed with land disposals to encourage commercial developments, regardless of management conflicts and resource problems. An example is the State's land disposals along the Parks Highway adjacent to Denali National Park and the resulting strip developments. The State should not have further opportunities to dispose of national interest lands.

I generally support a combination of the Environmental Enhancement Alternative (Alternative B) and the Preferred Alternative. Most important, the entire Corridor should be kept in federal ownership with no lands made available for State selection. Indeed, the Corridor should be administratively managed and eventually Congressionally established as a special conservation system unit. The Dalton Highway should be designated as a National Scenic Highway, with guarantees to protect its natural character.

I support the Preferred Alternative's recommendation to eliminate development nodes at Pump Station 3 and Prospect Creek. However, the Chandalar Shelf development node should also be eliminated, because of the lack of demonstrated need for this development.

18 continued

2.

I oppose onsite disposals within the Coldfoot and Yukon Crossing development nodes. In general, development should only be allowed within the other defined nodes and only under federal leases.

I recommend adoption of the mineral development policies defined in Alternative B (Actions B-1 and B-2) which provide for mineral closures in crucial wildlife habitat, key watersheds, and recommended wilderness areas.

I strongly support Action B-10, which provides for consolidation of land ownership patterns in the Central Arctic Management Area. I especially support the consolidation of the Oolamnagavik Block to form contiguous federal land connecting the Gates of the Arctic National Park and the Colville River, for the purpose of consistent resource management.

18-1 I also support adoption of the "Partial Wilderness Alternative," and I further recommend wilderness designation of the consolidated Oolamnagavik Block.

Finally, I encourage retention of the existing "Limited Type 3" offroad vehicle policy, which allows only snow machines less than 600 pounds with adequate snow cover.

Please strive for Utility Corridor management policies which protect the magnificent natural resources at stake.

Thank you very much for considering my views.

Sincerely,

Richard Spotts js

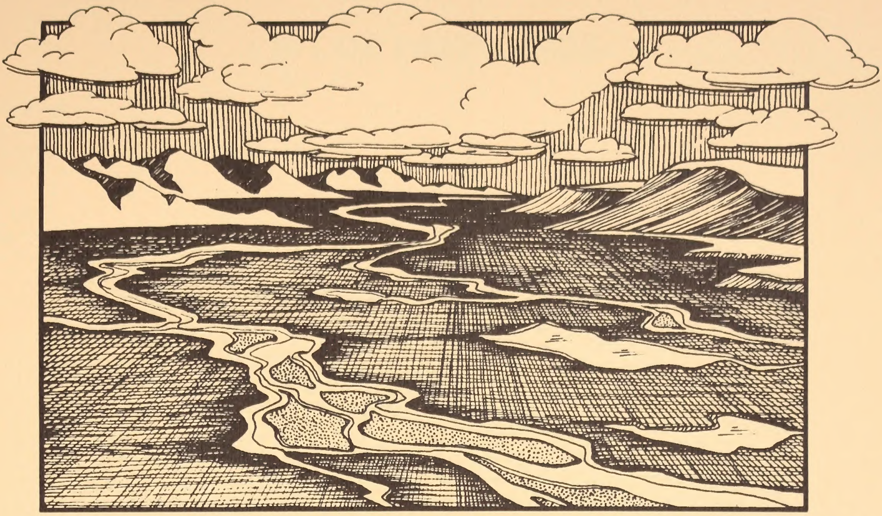
Richard Spotts

RS/js

5604 Rosedale Way
Sacramento, CA 95822

Response to comment letter No. 18 - Richard Spotts

18-1
See answer 4-3



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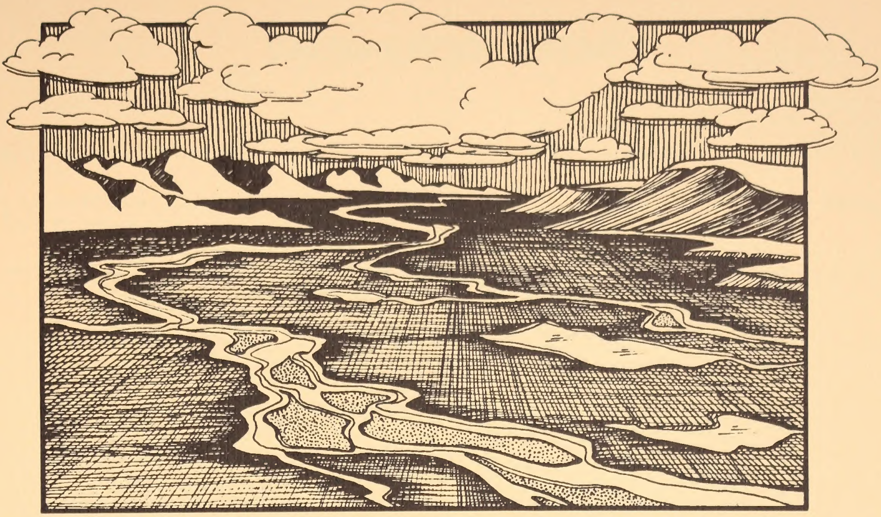

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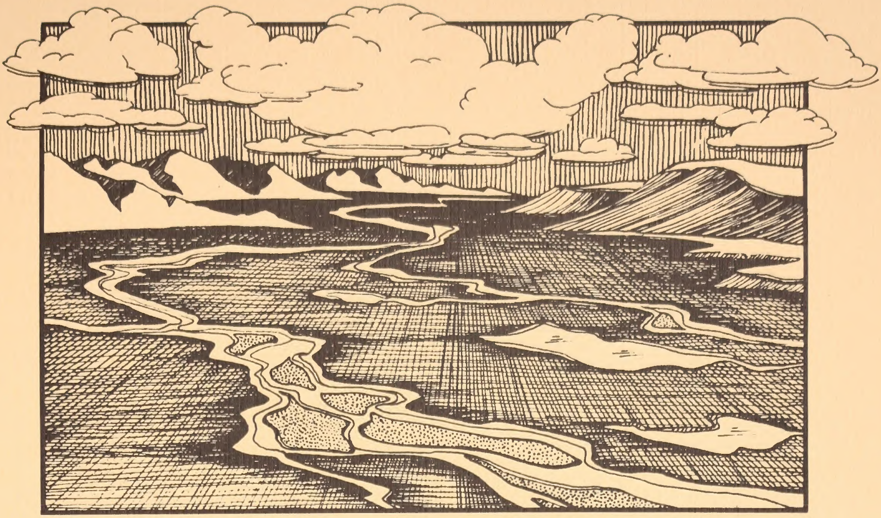


Appendices

Appendix A: Standard Stipulations and Recommended Wildlife Protection Measures
Appendix B: BLM's Mineral Potential Classification System
Appendix C: ANILCA Section 810 Evaluation and Findings
Appendix D: Proposed Action Recommended Wilderness Area

APPENDIX A

Standard Stipulations and Recommended Wildlife Protection Measures

The protection measures listed here have been formulated for Alaskan arctic values and result from the analysis of available studies and literature review. They are intended to protect crucial habitat and wildlife values within the study area if development occurs. All of the biological lease stipulations listed after these recommendations would apply. The reader is referred to these stipulations as a guide to the standard operating procedures used to protect wildlife and wildlife habitat from development activities.

Terrestrial Wildlife

1. Implement protection measures recommended by the Peregrine Falcon Recovery Plan-Alaska Population (U.S. Fish and Wildlife Service 1982)

2. A Surface Development Plan should be prepared as part of an EIS, which would allow the orderly development of oil and gas field by designing reasonable estimates of the development needs throughout the life of the field, and ensure caribou passage to and from important use areas. A development plan is important for the study area because of wildlife concentrations and migration routes through the area.

3. The natural drainage patterns should be identified before and maintained during construction of roads, pads, pipelines, and other facilities. Culverts, bridges, and other such drainage structures should be installed where needed to maintain natural drainage patterns.

4. Aircraft should be required to maintain an altitude of 1,000 ft. AGL year-round (except for take off and landings).

5. Fill or excavation for siting of facilities should be allowed in Class I wetlands and upland habitats. No fill or excavation would be allowed within Class II-VIII wetlands if reasonable alternatives exist for siting of facilities outside of these areas.

6. Construction of roads, pads and facilities should be accomplished between October 1 and April 30 to the maximum extent possible. Routine maintenance, production and transportation should be allowed year-round.

Aquatic Resources

Recommendations for management and protection of aquatic resources within the study area must center on an initial inventory and systematic monitoring of the resource. Management has little or no options when specific resource data is not available. An initial inventory will establish baseline data, identify crucial habitat, and better inform land managers of resource values and management options. Recommendations to eliminate or mitigate impacts resulting from oil and gas exploration, development, production and transportation and other human uses are as follows:

1. Where possible, restrict exploration and development activities to winter operations. Although winter operations increase the potential for some impacts (e.g., water removal under ice and contamination of overwintering habitat), the chance of overall catastrophic impacts are significantly reduced.

2. Restrict gravel removal to large rivers channels and to the floodplain within the channel during low water periods and make every effort to maintain existing flow regimes.

3. Restrict to low water periods construction activities on stream crossings of roads and pipelines and install bridges or culverts to maintain historic flow regimes and prevent interference with fish migrations. This restriction allows construction to proceed, while minimizing siltation, channel modification, and obstructions to fish migration.

4. On all streams where oil and gas development may have an impact, identify crucial habitat areas (spawning, rearing, and overwintering habitat) and avoid any direct alterations of these areas. Protection of crucial habitat is very important to proper management of the fishery resources.

5. Allow no blocking of stream flow or stream channel redirection that allows dewatering of spawning, rearing, or overwintering habitat used by an anadromous species. This includes ensuring that culverts and other man-made water structures do not freeze up in the winter or back up at high flow. Make every effort to avoid activity that effects these habitats utilized by resident species.

6. Work with the State of Alaska, Department of Fish and Game to develop fishing regulations that ensure the preservation of existing fishery population levels and allow a sustained yield as demands for the resources increase.

Standard Stipulations

The following is a description of standard stipulations regularly placed on authorized activities within the study area. Application of these stipulations is part of the recommendations for the protection of the wildlife and wildlife habitat outlined in Section 5 of this report.

Summer Stipulations

1. The Bureau of Land Management (BLM), Arctic District Manager, or his delegate, is the Authorized Officer (AO).

2. A letter of non-objection will be required from the State of Alaska and/or the appropriate Native Corporations before entry onto any State or Native selected land.

3. The Permittee must notify BLM immediately of any changes or modifications in plans covering field operations.

4. The Permittee will conduct an environmental briefing of all employees, contractors and subcontractors, including pilots, which will cover these stipulations. A copy of these stipulations shall be posted in a conspicuous place in the crew quarters.

5. No historic site, archeological site or paleontological resources shall be disturbed in any manner now shall any item be removed. Any site discovered during the course of field operations will be reported promptly to the Authorized Officer (AO) and in the completion report (Stipulation #14).

6. All operations must not impede rural residents from pursuing their traditional subsistence activities (ANILCA, PL 96-487).

7. The Permittee will be financially responsible for any fire caused by field operations which get out of control.

8. Harassment of peregrine falcons, as defined in Section 17.3 of Part 17,Title 50, CFR of the Endangered Species Act, and harassment of eagles, as defined in Section 22.3, Part 22, Title 50 CFR, will not be permitted.

Certain activities will be restricted, as described below, within specific radii of peregrine falcon nest sites during the time period specified:

a. Within one mile of nest sites:
  i) Maintain a minimum aircraft altitude of 1,500 feet above nest level from April 15 to August 31.
  ii) All ground level activity is prohibited from April 15 through August 31.

b. Within two miles of nest sites activities having high noise levels are prohibited from April 15 through August 31.

If peregrine falcons are encountered in cliff areas during permitted activities, leave the area and follow the restrictions listed above. Any site discovered during the course of field operations will be reported promptly to the AO and in the completion report (Stipulation #14). If the field party needs to revisit an area with a potential nest site, please contact the Arctic District Wildlife Biologist at 356-5130 for more information.

9. No feeding, chasing or buzzing by aircraft of any wildlife.

10. The Permittee shall protect all survey monuments, witness corners and reference monuments against destruction, obliteration or damage. Any damaged, destroyed or obliterated monuments and corners shall be reestablished to the original exact location at the permittee's expense. A record of the reestablishment shall be submitted to the AO.

11. The Permittee shall hold the United States harmless against and from all demands, claims or liabilities of any nature arising directly or indirectly from any operation on the land.

12. The following data will be submitted to the Division of Minerals (985), Mineral Assessment Branch, Alaska State Office, 701 C Street, Anchorage, Alaska 99513:

a. A location map of all field sampling sites at a scale of 1:250,000 or larger.

b. Quality legible copies of all original observations and recordings, including descriptions of rock and hydrocarbon samples taken, keyed to the location map required in (a).

c. Results of all analyses conducted on rock and hydrocarbon samples, including, but not limited to, geochemical techniques, reservoir and source rock property determinations, and paleontologic and palynologic information.

Data required in (a) and (b) will be submitted within 30 days after the last day of permitted use. Data required in (c) will be submitted within 30 days of completion of analyses or within one year of completion of the permitted activity, whichever comes first. All data submitted which is clearly marked as proprietary of confidential will be kept confidential according to the standards and conditions set forth in BLM Manual Section 1273 (copies available upon request). All third party requests for access to such data will be referred to the Permittee.

There will be no publication of or public access to the data or derived interpretations or conclusions without the express written consent of the Permittee.

The Permittee will be reimbursed for reproduction of data at a rate consistent with prevailing local commercial rates for such services.

13. The Bureau of Land Management, through the AO, reserves the right to impose closure of any area to operators in periods when fire danger or other dangers to natural resources are severe.

14. Upon program completion or within 30 days of cessation of operations or the program, a final summary report

shall be submitted to the District Manager, Arctic District Office, 1150 University Avenue, Fairbanks, Alaska 99709-3844.

The data shall include:

a. A description of all work performed.

b. Charts, maps or plats depicting the areas and blocks in which the exploration was conducted and specifically identifying the lines of geophysical traverses.

c. The dates on which the actual exploration was conducted.

d. A statement that all terms and conditions have been complied with or that corrective measures shall be taken to rehabilitate the lands or other resources.

15. All fuel containers must be marked with the operator's name, date purchased and contents. No fuel storage or refueling of equipment shall be allowed within the flood plain of a river or lake.

16. All refuse, fuel, food tins, human wastes and debris must be recovered from the public lands to approved collection sites. Garbage and human wastes may not be buried.

17. The foregoing provisions do not relieve the contractor or his subcontractor of any responsibilities or provisions required by any applicable laws or regulations.

Winter - Seismic Stipulations

In the performance of any operations under a Notice of Intent or Permit for geophysical exploration in the Arctic District Area, the applicant known here as the "Permittee" shall comply with the following stipulations:

General

1. The BLM Arctic District Manager or his delegate is the Authorized Officer (AO) for this permitted activity.

2. Communication regarding sections 1 through 5 of this attachment shall be addressed to:

Arctic District Manager
1150 University Avenue
Fairbanks, Alaska 99709-3844
(907) 474-2300

3. The Authorized Officer or his designated Field Representative may issue temporary suspension orders for any activity if operations are in non-compliance with these stipulations.

4. Requests to resume suspended activities shall be made directly to the Authorized Officer when the non-compliance has been corrected.

5. In matters of disagreement between the Authorized Officer and the Permittee, appeals may be made directly to the BLM State Director.

6. This permit is not valid for seismic exploration until the Authorized Officer receives detailed descriptions and plats of proposed shot lines (scale at least 1:250,000) and principal contacts, including field representatives, are identified

by both parties.

7. As a condition of this permit, the Government of the United States of America reserves access to all geophysical data, processed geophysical information, reprocessed geophysical information, and interpreted geophysical information collected by the Permittee pursuant to this permit. The Division of Minerals, Chief Branch of Mineral Assessment, shall act on the Government's behalf in accordance with Section 6.

8. The Permittee may be requested by the Authorized Officer to furnish quarters and transportation for designated field representatives or observers to inspect operations.

Environmental

1. Permittee will conduct an environmental briefing for all employees, contractors, and subcontractors which will cover the stipulations attached to the permit.

2. All operations will be conducted in such a manner as not to cause damage or disturbance to any fish or wildlife and subsistence resources. This includes, but is not limited to, the following:

    a. No seismic vehicle operations within one-half mile of any denning barren ground grizzly (in the upland area) or any denning polar bear (near the sea coast or in the lower reaches of major rivers or estuaries).

    b. No chasing by vehicles or buzzing by aircraft of any wildlife. Particular attention will be given to not disturbing caribou.

    c. Operators shall prohibit their employees, agents, contractors, subcontractors and their employees, while on duty or living at any camp or mobile camp, from feeding wild animals or birds or from leaving garbage or other potentially edible items which would attract wild animals or birds. Garbage will be kept in covered containers while waiting incineration.

    d. Aircraft shall maintain 1,000 foot altitude (except for take off and landings) over designated caribou concentration areas (i.e., winter and summer ranges, insect relief areas, etc.) during the specific time period designated unless doing so would endanger human life or be an unsafe flying practice.

3. All operations shall be conducted with due regard for good resource management and in such a manner as not to block any stream, or drainage system, or change the character or course of a stream, or cause the pollution or siltation of any stream or lake.

4. All activities shall be conducted so as to avoid or minimize disturbance to vegetation.

5. Seismic operations are to begin only after the seasonal frost in the tundra and underlying mineral soils has reached a depth of 12 inches; the average snow cover a depth of 6 inches.

6. Seismic operations will cease when the spring melt of snow begins; approximately May 5 in the foothill areas exceeding 300 feet in elevation; approximately 15 May in the northern coastal areas. The cut-off date will be determined by the Authorized Officer.

7. To prevent surface disturbance, tracked vehicles will not execute tight turns by locking one track.

8. Cultural Resources

    a. The Antiquities Act of June 8, 1906, (34 Stat. 225; 16 U.S.C. 431-433) prohibits the appropriation, excavation, injury or destruction of any historic or prehistoric ruin or monument, or any other object of antiquity, situated on lands owned or controlled by the United States. No historic site, archeological site or camp, either active or abandoned, shall be disturbed in any manner nor shall any item be removed. Should such sites be discovered during the course of field operations, the Authorized Officer will be promptly notified.

b. All operations must not impede rural residents from pursuing their traditional subsistence activities (ANILCA, PL 96-487).

Operational

1. Exploration activities will employ low ground pressure vehicles of the rolligon, ARDCO, Trackmaster, Nodwell or of a smiliar type. The limited use of tractors, equipped with wide tracks or "shoes" will be allowed to pull the camp and fuel trailers. Any exceptions to this stipulation will require the written approval of the Authorized Officer.

2. Crossing of waterway courses shall be made using a low angle approach in order not to disrupt the naturally occurring stream or lake banks.

a. Alteration of the banks of a watercourse is prohibited.

b. If snow ramps or snow bridges are utilized at watercourse crossings for bank protection,shall be substantially free of soil and/or debris. Snow bridges shall be removed or breached immediately after use or before spring breakup.

c. Equipment shall not enter open-water areas of watercourses.

d. To avoid additional freezedown of deep water pools harboring overwintering fish, watercourses shall be crossed at shallow riffle areas from point bar to point bar whenever possible.

Compaction or removal of the insulating snow cover from the deep-water pool areas of rivers known to harbor overwintering fish shall be avoided.

3. No bulldozing of tundra areas, trails, or seismic lines will be allowed. This stipulation, however, does not prohibit the clearing of drifted snow along a trail or seismic line nor in a camp, to the extent that the tundra mat is not disturbed. Also, it does not prohibit the clearing of snow on a lake or river ice surface in order to prepare an aircraft runway.

4. Camps will be situated on gravel bars, sand, or other durable lands. Where leveling of trailers or modules is required and the surface has a vegetative mat, leveling will be accomplished with blocking rather than leveling with a bulldozer.

5. Camps will not be located on frozen lakes or on river ice. The location of camps on river sand or gravel bars is allowed and, where feasible, encouraged.

6. The contractor shall protect all survey monuments, witness corners and reference monuments against destruction, obliteration or damage. He shall, at his expense, re-establish damaged, destroyed or obliterated monuments and corners in their original exact position. A record of the re-establishment shall be submitted to the Authorized Officer.

7. Water Quality

a. All parties shall comply with applicable "Water Quality Standards" of the State of Alaska as approved by the Environmental Protection Agency.

i) Waste water shall receive treatment conforming to federal requirements for secondary treatment if Arctic-tested package treatment facilities are used.

ii) If chemical recirculating sewage facilities are employed, they shall be kept separate from the gray wash and kitchen waste water. Gray wash water and kitchen waste water may be filtered to remove the solids and the liquid discharged to the land surface. All solids and sludges shall be incinerated.

8. Air Quality

a. Emissions from equipment and burning materials shall be held within Federal and State air quality standards.

9. Solid Waste

a. A solid waste management plan must be approved by Alaska Department of Environmental Conservation (D.E.C.) prior to initiating field work (Ref. PL 94-580). If approved by the D.E.C., all combustible solid waste, including cartons and used lubricating oils will be incinerated or returned to the base of operations for approved disposal. All non-combustible solid waste, including fuel drums, will be returned to the base of operations for approved disposal. There will be no burial of garbage or the dozing up of any area for the burial of anything.

b. Seismic lines shall be left clean of all foreign debris. This shall include, but is not limited to, wire, lathe, pin flags and reflectors.

10. Fuel Handling and Storage

a. A hazardous liquid spill control and contingency plan for each geophysical party will be submitted to the Authorized Officer prior to beginning operations (40 CFR 112).

b. Oil spills will be incinerated in approved receptacles but not on lake or river ice.

c. Although fuels may be off-loaded from aircraft on the ice, there will be no storage of fuels on lake or river ice, even on a temporary basis. This applies to any active of any river or lake.

d. All fuel spills will be cleaned up immediately, taking precedence over all other matters, except the health and safety of personnel. Spills will be cleaned up utilizing absorbent pads or other approved methods. As soon as possible, but not later than 24 hours, notice of any such discharge as defined in Alaska Statute Title 18, Chapter 75, Article 2, will be given to:

i) The Authorized Officer in Fairbanks.

ii) Such other Federal and State officials as are required by law to be given such notice.

e. Ample oil spill cleanup materials (absorbents) will be carried by each seismic crew and stored at all fueling points and vehicle maintenance areas.

f. Storage and Handling

i) State and Federal safety standards for fuel handling will be followed.

ii) Drip basins or absorbent diapers will be placed under all non dry-disconnect-type fuel line couplings.

11. All fuel containers used, including barrels and propane tanks, must be marked with Permittee's name, fuel type, and purchase date (e.g., GSI, Hydraulic Fluid, 1983).

12. Field parties will keep daily records of seismic lines completed, fuel haul and camp move routes and campsites utilized.

13. The foregoing provisions do not relieve the contractor or his subcontractors or any responsibilities or provisions required by any applicable laws or regulations.

14. A copy of these stipulations shall be posted in a conspicuous place in each camp site established for the purpose of geophysical exploration with NPR-A.

15. More than one Permittee may be approved to conduct geophysical activities in the same area within NPR-A or other public lands. In such a case, it is incumbent upon the Permittees to resolve any conflicts in their activities. The Authorized Officer will curtail all activities within certain areas if resolution cannot be achieved by the Permittees.

Notice of Completion

1.A final summary report shall be submitted to the Authorized Officer within 30 days of completion or cessation of operations. This report shall include:

a. Program completion date.

b. Field effort in crew weeks.

c. Line miles of surveys completed.

d. Summary of incidents or accidents (including reported oil spills).

e. Location map on 1:250,000 scale showing location of lines actually shot, campsites utilized, and routes used for fuel hauls and camp moves.

2. The Authorized Officer shall receive copies of Permittee's notification to the BLM Alaska Chief, Division of Minerals, in order to demonstrate satisfaction of permit stipulations 1.6 and Permit Attachment 1.

Bonding

Permittee must file with the Authorized Officer evidence of bonding. A rider to either a $50,000 nation-wide or $25,000 state-wide bond shall pertain to the NPR-A and Arctic Resource Area seismic activities. This bonding requirement shall apply separately to each seismic train.

Geophysical Data

1. Inspection, selection, and submission of geophysical information and data:

a. The Permittee shall notify the BLM Alaska Chief, Division of Mineral Assessment (CDM) immediately, in writing, of the acquisition, processing, reprocessing, or interpretation of any geophysical information or data collected under this permit.

b. All such data and information collected by the Permittee shall be available for inspection by the CDM. At any time within five years after receiving a notice of the acquisition, processing, reprocessing, or interpretation of any geophysical information and data, the CDM may select all or part of the geophysical information.

c. If the CDM decides to keep all or a portion of the geophysical information and data, he shall notify the Permittee, in writing, of his decision.

d. In the event that geophysical data, processed geophysical information, reprocessed geophysical information, or interpreted geophysical information is transferred from the Permittee to a third party, or from a third party to another third party, the transferor shall, in writing, so notify the CDM and shall require the receiving third party, in writing, to abide by the obligations of the Permittee as specified in this section as a condition precedent to the transfer of information or data.

e. Each submission of geophysical data, processed geophysical information, reprocessed geophysical information, and interpreted geophysical information, shall contain, unless otherwise specified by the CDM, the following:

i) An accurate and complete record of each geophysical survey conducted under the permit, including digital location data and final location maps of all survey stations.

ii) All seismic data developed under a permit presented in a format and of a quality suitable for processing.

iii) Processed geophysical information derived from seismic data with extraneous signals and interference removed, presented in a format and of a quality suitable for interpretive evaluation, reflecting state-of-the-art processing techniques.

iv) Other geophysical data, processed geophysical information, reprocessed geophysical information, and interpreted geophysical information obtained from, but not limited to, Vibroseis logs, gravity and magnetic surveys, and special studies such as refraction and velocity surveys

2. Reimbursement to Permittees:

a. After the delivery of geophysical data, processed geophysical information, and reprocessed geophysical information selected by the CDM, and upon receipt of a request for reimbursement and a determination that the requested reimbursement is proper, the Permittee or third party shall be reimbursed for the cost of reproducing the selected information and data at the Permittee's or third party's lowest rate or at the lowest commercial rate established in the area, whichever is less.

b. The Permittee shall not be reimbursed for the cost of any interpretations performed or reproductions thereof submitted.

3. Disclosure of information and data to the public:

a. The CDM may only make information and data submitted by a Permittee available in accordance with the requirements of and subject to the limitations of the Freedom of Information Act (5 USC 552) and the implementing regulations (43 CFR Part 2).

b. No information or data, determined by the CDM to be exempt from public disclosure, shall be provided to any affected State, or be made available to the executive of any affected local government or to the public, unless the Permittee and all persons to whom such Permittee has sold the information or data under promise of confidentiality agree to such an action.

4. Disclosure to independent contractors

a. The CDM reserves the right to disclose any information or data acquired from a Permittee to an independent contractor or agent for the purpose of reproducing, processing, reprocessing or interpreting such information or data. The CDM shall notify the Permittee who provided the information or data of intent to disclose the information or data to such independent contractor or agent.

b. Prior to any such disclosure, the contractor or agent shall be required to execute a written commitment not to transfer or to otherwise disclose any information or data to anyone without the expressed consent of the CDM. The contractor or agent shall be liable for any unauthorized use by or disclosure of information or data to third parties.

5. Communication:

All correspondence regarding the data requirements of this section shall be addressed to:

Division of Minerals
Chief, Branch of Mineral Assessment
6881 Abbott Loop Road
Anchorage, AK 99507

APPENDIX B

BLM's Mineral Potential Classification System (BLM Manual 3031)

Mineral Potential Classification System

I. Level of Potential *

O. The geologic environment, the inferred geologic processes, and the lack of mineral occurrences do not indicate potential for accumulation of mineral resources.

L. The geologic environment and the inferred geologic processes indicate low potential for accumulation of mineral resources.

M. The geologic environment, the inferred geologic processes, and the reported mineral occurrences or valid geochemical/geophysical anomaly indicate moderate potential for accumulation of mineral resources.

H. The geologic environment, the inferred geologic processes, the reported mineral occurrences and/or valid geochemical/geophysical anomaly, and the known mines or deposits indicate high potential for accumulation of mineral resources. The "known mines and deposits" do not have to be within the area that is being classified, but have to be within the same type of geologic environment.

ND. Mineral(s) potential not determined due to lack of useful data. This notation does not require a level-of-certainty qualifier.

II. Level of Certainty

A. The available data are insufficient and/or cannot be considered as direct or indirect evidence to support or refute the possible existence of mineral resources within the respective area.

B. The available data provide indirect evidence to support or refute the possible existence of mineral resources.

C. The available data provide direct evidence, but are quantitatively minimal to support or refute the possible existence of mineral resources.

D. The available data provide abundant direct and indirect evidence to support or refute the possible existence of mineral resources.

For the determination of No Potential, use O/D. This class shall be seldom used, and when used, it should be for a specific commodity only. For example, if the available data show that the surface and subsurface types of rock in the respective area is batholithic (igneous intrusive), one can conclude with reasonable certainty that the area does not have potential for coal.

*As used in this classification, potential refers to potential for the presence (occurrence) of a concentration of one or more energy and/or mineral resources. It does not refer to or imply potential for development and/or extraction of the mineral resource(s). It does not imply that the potential concentration is or my be economic, that is, could be extracted profitably.

APPENDIX C

COMPLIANCE WITH ANILCA SECTION 810 (a)
for the
WILDERNESS EIS for ALL ALTERNATIVES

Evaluation and Findings

FISHERIES

Expected reduction, if any, in harvestable resources.

Fishing for subsistence purposes does occur on WSA rivers, but harvest is quite small. The Chandler, Anaktuvuk, Nanughuk, Itkillik, and Kuparuk rivers all contain fisheries which are used for subsistence purposes. However, most subsistence fishing occurs on private or state lands outside the WSA. None of the actions in any of the alternatives will permanently affect subsistence fish populations on or off WSA lands, although pipeline crossings of streams may temporarily displace fish.

Expected reduction, if any, in availability of resources due to alterations in resource distribution, migration, or location.

None of the alternatives contains any proposed or hypothetical actions that will reduce the availability of fish resources by permanently altering distribution, migration, or location. Based on the wildlife biologist's discussion of fisheries, no significant impacts are expected to fisheries. If pipelines are constructed, there may be some temporary disruption of distribution or location; however, no permanent effects are expected.

WILDLIFE

Expected reduction, if any, in harvestable resources.

Most of the subsistence activities occurring in the WSA are related to hunting or trapping. In all alternatives except the All Wilderness Alternative, there will be some reduction in harvestable resources. In the wildlife biologist's assessment, most of this reduction will be temporary. Some permanent population reductions may occur in the "worst case" scenario of oil and gas development with construction of several east-west pipelines. However, none of the population reductions should cause a significant restriction to subsistence uses and resources in the WSA since all villages using the area also use a much higher percentage of lands outside the WSA for subsistence (see Chapter 4).

Expected reduction, if any, in availability of resources due to alterations in resource distribution, migration, or location.

The All Wilderness Alternative will cause no reduction in the availability of resources because of altered wildlife distribution, migration, or location. All other alternatives have the potential to reduce resource availability by changing wildlife distribution, location, or migration routes. However, much of this disruption will be temporary, occurring only during construction of roads and pipelines, or during drilling operations. Migration routes could be changed permanently by construction of east-west pipelines (especially if pipelines are constructed totally above ground) if appropriate mitigation is not applied. Changes in migration routes, if they were to occur, would cause a significant restriction to subsistence. However, if east-west pipelines were built, the EIS for those actions would include mitigation measures to make a significant restriction to subsistence unlikely.

OTHER RESOURCES

Expected reduction, if any, in harvestable resources.

None of the alternatives in the EIS will cause a significant reduction in any other harvestable resources. Any reduction will be temporary and limited. Because of the low percentage of WSA lands included in the total subsistence areas of any of the affected villages, there will be no significant restriction on subsistence uses or resources.

Expected reduction, if any, in availability of resources due to alterations in resource distribution or location.

Any of the development scenarios discussed in the plan will disturb such a small portion of the total lands available for subsistence, both in the WSA and overall, that no significant restriction to subsistence resources or uses will occur from alterations in resource distribution or location. Any such reduction will be temporary and limited in nature and area.

ACCESS

Expected limitations, if any, in access of subsistence users resulting from the proposed action.

Theoretically, there will be no limitations to access by subsistence users in any of the alternatives. However, if there is oil and gas development with subsequent pipelines, roads, and fields, then access may be limited or rerouted to certain portions of lands in the WSA used for subsistence. There are other routes available, and the limitations of access will be small; thus, no significant restriction occurs.

AVAILABILITY OF OTHER LANDS, IF ANY, FOR PURPOSES TO BE ACHIEVED

No other lands exist for the purposes to be achieved. This plan covers the existing public lands in the WSA.

OTHER ALTERNATIVES

There are 5 alternatives discussed in the plan and in this document. See chapter 4 for a more complete discussion of the potential effects of each alternative upon subsistence uses and resources in the area.

OTHER COMMENTS

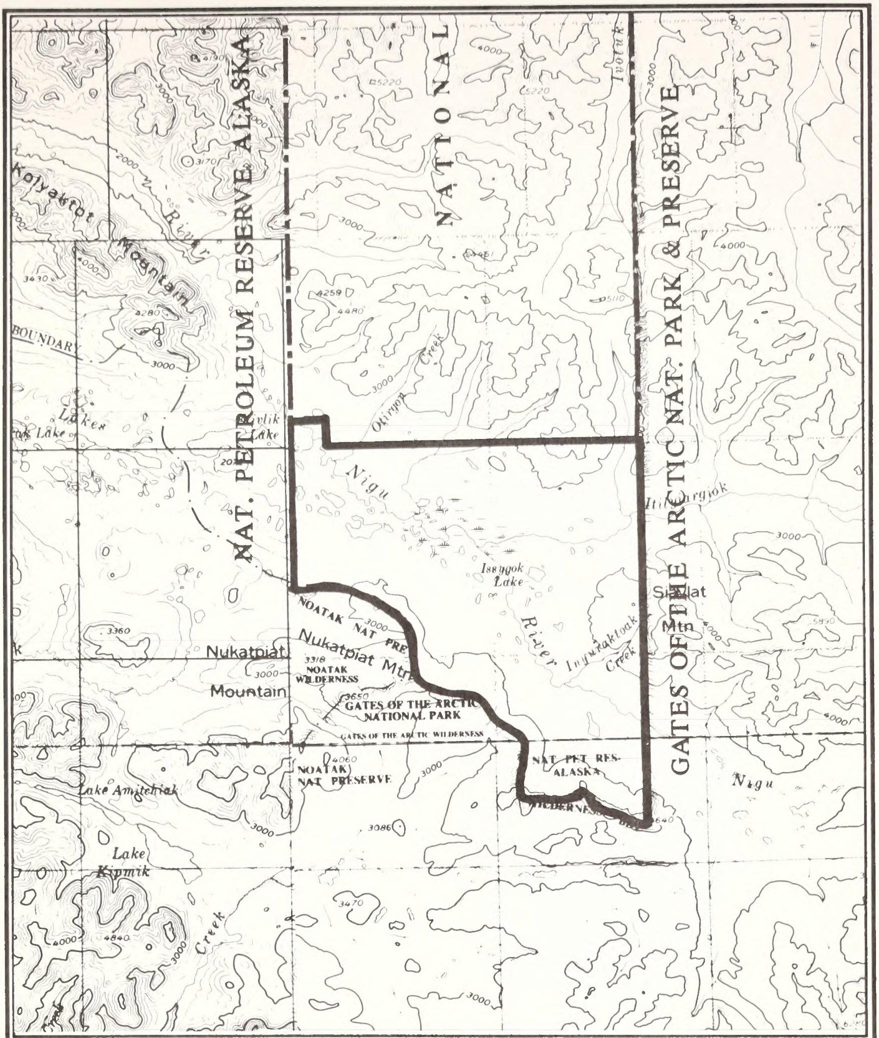
Neither the proposed alternative, nor any of the other alternatives, will have a significant restriction upon subsistence uses, needs, or resources in the WSA. There are potential limitations to subsistence uses in certain areas if oil and gas development occurs. However, the area involved is not a significant portion of the subsistence area of either Anaktuvuk Pass or Nuiqsut; neither Kaktovik nor Nolan/Wiseman is affected.

Conclusion

For the reasons given above and also in Chapter 4, neither the Proposed Action nor any of the alternatives will cause a significant restriction to subsistence uses and needs.

APPENDIX D

PROPOSED ACTION
RECOMMENDED WILDERNESS AREA



BOUNDARY MAP
Map sheets Killik River, Survey Pass, Ambler River, and Howard Pass.

Scale in Miles
0 5

Within Tps. 30, 31, 32 N., Rs. 13 and 14 E.
Kateel River Meridian

PROPOSED ACTION

RECOMMENDED WILDERNESS AREA
41,000 ACRES

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